Building Bridges. Scholars, History and Historical Demography. A Festschrift in Honor of Professor Theo Engelen

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Contents

[1]
INTRODUCTION

TIM RISWICK & PAUL PUSCHMANN

Introduction: building bridges

This edited volume has been compiled to thank and honor Theo Engelen on the occasion of his retirement from the post of full professor of historical demography. Moreover, the book is also a token of the authors' gratitude for all the efforts made by Engelen as dean and as rector to maintain and improve the reputation of the Radboud University in general, and the Faculty of Arts and the Department of History in particular, and to connect the university further to the larger academic world. Engelen was for 48 years – from 1970 until 2018 – affiliated with the Radboud University (formerly known as Catholic University Nijmegen): 6 years as a student and 42 years as an employee. During this long period he has held more or less all the academic positions obtainable at a university: student-assistant, PhD student, postdoctoral researcher, assistant professor, associate professor, full professor, vice-dean, dean and rector. Although he spent considerable time in management roles, especially during the most recent years, most of his academic career was devoted to teaching and conducting research on the history of what he considers the core of human existence: love, sexuality and death (De Groot & Schreven, 2006). In this introduction, we will briefly describe and reflect on Engelen's academic life course, and explain how this volume is organized.

LIFE AND WORK OF THEO ENGELEN

Theo Engelen was born in 1950, the oldest child in a non-academic family. He grew up in Geulle (Limburg), in the southernmost part of the Netherlands. After finishing the local primary school he went to Henric van Veldeke-college in Maastricht, where he graduated from the gymnasium

(grammar school) in 1970. Upon his graduation, he left Limburg's hilly landscape in order to study history at the Catholic University of Nijmegen. While in those days Nijmegen was also known as 'Havana on the river Waal', because of its extremely left-wing political orientation, Engelen did not join any student associations, and kept his distance from student protests, as he was aware that there were always two sides to each story. However, he took part in the demonstrations against the Vietnam War, as to him it was crystal clear who was wrong on the battlefield.[1] We also know that Engelen was inspired by the hippie movement, and especially by the idea of improving the world in a peaceful way (Meijerink, 2014).

After studying history for four years, a lecture by Professor Ad van der Woude from Wageningen University on historical demography immediately fascinated Engelen. In many ways Van der Woude, who had worked extensively on the population history of the Netherlands and enjoyed an international reputation, inspired the young Engelen. Under the supervision of Van der Woude, Engelen started to conduct his first tentative empirical research. The two got along very well and their relationship was strengthened by Van der Woude's practice of staying overnight with his Nijmegen students when he made the journey from Wageningen. Van der Woude would shape Engelen's future academic career, as is reflected by the fact that Engelen dedicated his demographic history of the Netherlands to his former professor (Engelen, 2009). Thanks to Van der Woude, already during his studies Engelen had become convinced that there is no better way of investigating the lives of people from the past than to study the information from demographic sources that are still available today. Engelen's time as a student came to an end when he graduated *cum laude* in early modern history in 1976 (Haverkamp, 2014; Cuppens & Sleutels, 2018).

While Engelen had been a student-assistant from 1974, upon his graduation he became a regular staff member of the history department and started to teach, as well as taking on some managerial responsibilities. An important moment in Engelen's career came when he was officially appointed as an assistant professor in 1982 to the section of economic and social history (see also Klep, this volume). This appointment, however, did not pass unnoticed; in fact, it even reached the national press, and caused students to protest, as they were in favor of a very left-wing candidate for the job (see also Brabers, this volume). Soon, however, peace returned, as it became clear that Engelen was an enthusiastic, inspiring and approachable lecturer, as well as a productive researcher.

Shortly after Engelen was appointed assistant professor, he began, under the supervision of Professor Paul Klep, to write a PhD thesis on the fertility decline in Limburg, the Netherlands (Engelen, 1987). At the time this historical topic was of great interest not only to historians and (historical) demographers, but also to contemporary development specialists, as the lag in fertility decline in African society was high on the agenda of the United Nations and the World Health Organization. The case of Limburg was interesting, because it was one of the regions in Europe where fertility decline was considerably delayed, and it was believed that an insight into the causes of the delay in fertility decline in a historical population would help improve family planning programs in the contemporary developing world. Engelen reached the conclusion that fertility decline was dependent not only on familiarity with and availability of contraception, and the (economic) motivations for making use of it, but also on the moral acceptance of intervention in human fertility. In the case of Limburg, religion, i.e. Catholicism, acted as a cultural filter which delayed the application of contraception. On 11 September 1987 Engelen defended his PhD thesis *cum laude*.

Engelen also held several positions outside the Radboud University. We mention at this point two in particular which were important for his career and the larger field of economic, social and demographic history. From 1995 to 2003, Engelen was research director of the Dutch inter-university postgraduate academy for economic and social history, the N.W. Posthumus Institute. In this post, Engelen shaped the *Changing Labor Relations in a Comparative Perspective, Western and Non-Western* (later called *Household and Labor*) program and managed to put historical demography more visibly on the research agenda of the institute. He guided many PhD students, both implicitly and explicitly, in the direction of his own research specialism, historical demography (see also Hillebrand or Schoonheim, this volume). On the international level, Engelen's influence increased when he became co-editor-in-chief of *The History of the Family. An International Quarterly*, a position which he held from 2001 to 2011. Under Engelen's editorship, *The History of the Family*, which from its beginning had been a journal with a good reputation, became one of the leading international journals in historical demography and family history in the world.

The work of Engelen became truly international when he set up the *Population and society in Taiwan and the Netherlands* project with Professor Arthur P. Wolf (Stanford University) and Professor Ying-Chang

Chuang (Academia Sinica). As well as producing several articles in international peer-reviewed journals, this project resulted in the influential book series *Life at the Extremes: the demography of Europe and China* (see also Gates & Shepherd and Chuang, this volume). These publications are devoted to systematic comparisons of nuptiality, fertility and mortality behavior between Europe and Asia, and are considered to be must-reads for everybody who is interested in Eurasian historical demography (see also Riswick, this volume). As his collaboration and friendship with his American and Taiwanese colleagues intensified, Engelen also began to give guest lectures at Stanford University, and during the academic year 2004/2005 he was a visiting scholar at Academica Sinica. During that time he worked on a book that became part of the *Life at the Extremes* series, which compared the demography of Nijmegen (the Netherlands) and Lugang (Taiwan) with each other (see Yinghui Hsieh, this volume). The *Population and society in Taiwan and the Netherlands* project forged connections with Asian academia, which he used later as dean and as rector to enlarge the network of the Radboud University, and to recruit promising students from this part of the world. For example, it also resulted in a PhD project that compared female-headed households in the Netherlands and Taiwan (see Lin, this volume). In sum, the Eurasian work had an important influence on Engelen's academic career, as also becomes clear from his inaugural lecture from 2006, which he gave upon his appointment as the first professor of historical demography in the Netherlands (in 2005). In his public lecture, he addressed the debate on deliberate fertility control in the Netherlands and Taiwan and came up with an interesting alternative view as to why Chinese marital fertility had been so much lower than Thomas Malthus had postulated.

Throughout his career, Engelen has made an enormous contribution to the education of history students. This ranges from seminars and lectures in general bachelor's and master's courses on history to more specialized thematic courses in which historical demographic behavior was the center of attention. Engelen gave lectures in almost every course on economic, social and demographic history, and supervised a great number of bachelor's, master's and PhD theses; he also taught statistics for some time. Many generations of students will never forget the name of Thomas Malthus, and his ideas on the relationship between resource development and population growth, nor will they forget about the demographic transition theory. Engelen has the ability to explain complex ideas by providing everyday examples and rendering them vivid with his sense of humor. He

taught students, for instance, that breastfeeding is important in the study of fertility, as it has a decreasing effect on women's fecundity, and he made everybody laugh when he added the warning that they should not try this at home as a method of contraception. Besides his lectures, students also praised Engelen for his approachability and for putting actions to words (Ligtenberg, 2014b).

HISTORICAL DEMOGRAPHY AS A MISSION AND A PASSION

In his research and teaching, Engelen used to preach that historical demography is the only specialization in the history department – apart from writing biographies – that brings us closer to the lives of our ancestors. It offers us a unique window into people's private lives in the past. First of all, historical demographers study the beginning and end of every life, as well as the most important transitions in a life course, as most of them are of a demographic nature: leaving the parental home, starting the first job, being promoted, marrying, having children, divorcing, retiring, et cetera. Second, historical demography offers opportunities which other specializations in history lack, as historical demographers have source materials at their disposal which cover the total population of historical societies. This is exceptional. After all, political historians deal with public documents, which inform us mainly about the decisions taken by the few people in a society who exercise political power. Cultural historians have to limit themselves mainly to those who were able to read and write, and economic historians only have detailed information on those people whose income was high enough to pay taxes. Consequently, most historians are occupied with the history of small minorities in historical societies, and neglect the less powerful majority. Historical demographic sources, by contrast, offer the opportunity to study all layers of a population and to include the lives of both men and women, and to systematically compare them (Engelen, 2009).

Historical demography allows us to understand how characteristics of a population (e.g. size and composition) influenced historical processes, such as industrialization, democratization, secularization and so on, and how these processes in turn shaped the demographic composition of the population by ways of migration, nuptiality, fertility, and mortality. By applying a life-course perspective, historical demography connects the micro-level of individual lives to macro-level processes and vice versa. To

be able to do this, historical demographers include the context in which lives are embedded, such as households, (kin) networks, and communities in the analyses. All of this requires high quality multi-layered datasets and specific database management skills as well as the know-how of complex statistical analyses, such as regressions, event history analyses and sequence analysis, methods which are mainly applied in the social sciences. Engelen understood that these techniques were important for making advances within the discipline of historical demography, and that students should become familiar with these techniques, but that this should not happen at the expense of the historical narrative. Consequently, during his career Engelen tried to bridge the widening gap between historians with a limited background in statistics on the one hand and sociologists with a lack of knowledge on historical societies on the other, by combining the art of the historian with the data skills of the social scientist. He himself made the utmost effort to teach his students basic statistical techniques and sent them to more advanced statistical courses, but he also made sure that both historians and social scientists attended historical demographic conferences.

Because of his duties as dean and rector Engelen had to temporarily postpone his work in historical demography. When in 2015 he resigned from the position of rector, he could have left academia, as by that point he had reached the age of retirement. He decided, however, to return to the history department and to take up his former role as a professor of historical demography. He continued his research on *The Rhythm of Life,* a book project which is devoted to seasonal patterns of births, marriages, ands deaths, which links history not only with the social sciences, but also with biology (Van den Broek, 2015b; Van Ham, 2015). The fact that he did not retire in 2015, but returned to historical demographic research, shows that historical demography has remained his chief mission and his great passion. Moreover, it demonstrated that he practiced what he preached, as he always argued in the debate on the retirement age that people should retire later as their lifespan had increased considerably in the period since this age was originally determined.

BRIDGING WORLDS

As Engelen's career developed he became a man of many worlds – Stanford and Taipei became his second and third homes – which he increasingly tried to connect to each other. He turned out to be an excellent builder of

bridges: not only between scholars and students, but also between disciplines and between academic research and teaching. The ability of Engelen to build bridges between scholars became even more required as he became the vice dean, and later the dean of the Faculty of Arts at Radboud University. In this context, he wrote himself: "There is only one thing more difficult than leadership, and that is academic leadership" (Engelen, 2016, p. 7).[2] He knew that personal contact was key to keeping the faculty together. When he became dean in 2013, Engelen wanted to get to know every person within the faculty personally and was greatly in favor of scholars looking beyond their own department (Cobussen, 2012). Furthermore, Engelen took up the challenge of defending the humanities in his new role as chair of the *Disciplineoverleg Letteren en Geschiedenis* (Discipline Counsel Arts and History) (Zuidweg, 2014). Engelen was the first dean to show that it is possible to combine a humanistic view with managerial capacities (see Van Mulken, this volume).

When Engelen was appointed as rector in 2014, his ability to build bridges between disciplines was not only useful but also necessary, as he had to represent the whole university. In his role as rector Engelen argued that the university should unite itself more. In deeds this was done by adding, for instance, the missing medallions of the social science and management faculties to the official chain of the rector. From that moment onwards all faculties were symbolically represented on the chain (Van den Broek, 2015a). In addition, Engelen continued to defend not only the humanities, but the whole academic community, against bureaucracy imposed by a distrusting government. During the opening speech of the academic year 2014-2015 he made this explicit by asking the minister to save the academic staff of the university from any further changes and to create more trust, realizing that the bridge between the government and the university was crucial for the optimal function of the latter (Haverkamp, 2015; see, for a reflection on the function of rector, Van Krieken, this volume).

Engelen's scientific rigor, his national and international collaborations, as well as his warmth and generosity, are typical of those scholars who have a calling for the field. All those who have met and collaborated with Engelen – students, doctoral students, colleagues, et cetera – have always had his unconditional support, and whenever necessary he acted as a mediator. Over the years he has remained the person with the friendly face, who also has an eye for the human being behind the scholar (Ligtenberg, 2014b). In a team he managed to create an atmosphere of mutual

respect, made sure that the contributions of different team members were acknowledged, and strived not only for academic excellence, but also for an optimal balance between the academic job and the private life of the scholars involved (Ligtenberg, 2014a). The number of those who owe their professional and personal formation to Engelen is beyond count. The title of this volume is therefore, appropriately, *Building Bridges: Scholars, History & Historical Demography*. The contributions stem from scholarship inspired by Engelen in one way or another. It is a tribute to him, and symbolizes the academic mission to keep searching for new answers to old questions and to pose new, even more challenging, ones.

We have organized the contributions of this volume into three sections, beginning with 'Building Bridges between Scholars'. This part of the book addresses Engelen's academic life course in more detail by examining his appointment as assistant professor and his role in the section of economic and social history. Furthermore, there are several contributions in this section which are of a personal nature, in which the authors share and reflect on the memories they have of working with Engelen. These personal contributions demonstrate the special connections that Engelen made with scholars both academically and personally.

The second part, 'Building Bridges within the History Department', includes contributions from a selection of scholars in the History Department of the Radboud University who have worked together with Engelen, most of them for a long time. All these authors are in some way inspired by Engelen's work and / or Engelen as a person. Most of these contributions also provide a reflection on how, in the broadest sense, historians can connect to each other's work in a world of ongoing specialization, and to (historical) demography in particular. The contributions include a broad range of topics: some of them are ones on which Engelen himself worked, while others are further removed from his own research specialization.

In the third and last section, 'Building Bridges within Historical Demography', the contributors write on topics connected with the work done by Engelen in the field of historical demography. The topics range from household structure, marriage patterns, and Eurasian comparisons to research on historical trends and seasonal patterns in fertility and mortality.

This section makes it clear that Engelen himself contributed to many important debates in historical demography and will continue to do so in the future.

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1. This is also something that comes back in his writing of fiction books for children that demonstrate his dislike for thinking in black/white or good/bad. For example in his books about the Second World War there are also 'good' Germans, scared resistant fighters and NSB members that are doubting their position. See for more information Van den Broek (2014) or Cuppens & Sleutels (2018).
2. Translation of "Er is maar een ding moeilijker dan leiderschap, en dat is academisch leiderschap" in Engelen, 2016, p. 7.

[2]
BUILDING BRIDGES BETWEEN SCHOLARS

[1]

PAUL KLEP

Explaining the rise of Theo Engelen and 'historical demography' in Nijmegen (1974-2005)

In this Festschrift in honor of Theo Engelen, some explanation of his remarkable scientific development and his successful efforts to build up 'historical demography' as a Nijmegen specialty should certainly not be missing. I will start my account with the arrival of Theo at the Department of Economic and Social History (ESG) in Nijmegen, and try to follow him up to his nomination as a full personal professor in 2005 at the same university. Since Theo has been my very talented, highly committed and humorous colleague for 30 years, I am very grateful to take up this task.

Firstly, I will discuss his university training and early publications, then his arrival in 1982 in the ESG Department and the ongoing austerity measures at that time, followed by some of his crucial years of research: 1984-1986. Finally, I will look at his national projects at the Posthumus Institute and his Taiwanese efforts during the 1990s and early 2000s. In the course of this review, the early development of the field of historical demography at Nijmegen University will be shown.

In February 1976, Theo Engelen graduated in Modern History at what was then called the Catholic University of Nijmegen. At the time, Modern History implied mainly political and cultural history, but from 1974 onwards Theo had followed with great interest the lectures given by Ad van der Woude at Wageningen University on historical demography and rural history. He completed one of his minors in this field, the other being in sociology. Inspired by scholars like Wilhelm Abel, the French *Annales*-historians and some Dutch sociographers, Van der Woude belonged to the so called Wageningen School of Agricultural and Rural History of the Ancien Regime, founded by B. H. Slicher van Bath, to which J. Faber and H. K. Roessingh also belonged. Supervising the historical demographic research of students outside Wageningen, the eminent scholar Ad van der

Woude had an important influence on the early demographic work of myself, Theo Engelen and Onno Boonstra (Klep, 1973; Engelen, 1979; Boonstra, 1984).

Very soon after his graduation, Theo Engelen was appointed as a scientific assistant at the sub-faculty of History as a whole; he worked for almost six years in this role, from 1976 to 1982, in which he was in charge of general teaching tasks, student guidance, and departmental management. Unfortunately, the Ministry of Education had reduced the length of most university studies from five to four years, and had introduced the so-called propedeuse, as a new examination after one year of academic training. One major task that Theo undertook was the coordination of the re-scheduling of the whole teaching program of the History sub-faculty (KDC, Klep, nr 724).

It is remarkable that during the years immediately following his graduation Theo was able to publish four substantial scholarly contributions. First of all, he wrote an article on social history that put him immediately on the Dutch scientific map. Dealing with the 18th century banditism of the so-called buck-riders in Limburg, he claimed that their common background was one of bad living conditions, caused by rising food prices and the progressive downsizing of small and marginal farms. Groups of wandering soldiers, unemployed and impoverished laborers, servants and craftsmen robbed farmers and broke into rural houses where for the most part they found decidedly slim pickings (Engelen, 1977a).

This picture was heavily criticized by Anton Blok, a professor of anthropology at Amsterdam who specialized in the 20th-century history of the Italian mafia. On the basis of research on court records in Limburg he reached the conclusion that the buck-riders were mostly small traders and self-employed craftsmen, many of them even possessing a permanent residence, who were protesting against the reduction of their economic opportunities and the fall of their social status. A reply by Theo Engelen, a rejoinder by Anton Blok and even a surrejoinder by Theo were the result.

The debate became required learning at various Departments of History in the Netherlands as it served as an example of the issues involved in the interpretation of archival records. Theo Engelen argued that the nominal occupations that were found in the court texts should be interpreted in the framework of the long-term process of rural impoverishment in the eighteenth century, causing the phenomenon (as in many places elsewhere in Europe) of unstable, wandering groups of impoverished people trying to find some plunder (Engelen, 1977a).

A second publication concerned the history of the city of Nijmegen in the seventeenth century, and in particular with the possible social and economic effects of the Peace Trade in Nijmegen in 1676-1678 (Engelen, 1978). Theo analyzed the structure of the income and expenditure of the city during 1669-1685, and the evolution of real wages earned by craftsmen. He added paragraphs on population development and migration. The changes in the total population had to be constructed from a critical interpretation of the series of baptisms and marriages of soldiers belonging to the garrison of Nijmegen. His conclusion was that the effects of the temporary presence of a multitude of foreign diplomats on the economy and demography of the city were quite restricted.

The future specialist in historical demography showed himself more explicitly in two other descriptive studies, published as early as 1977 and 1979. Theo Engelen took part in a wider project of Wageningen University, which focused on regional demographic and socio-economic developments in the 17th and 18th centuries. Splendid examples were published by Slicher van Bath (1957) on Overijssel, Van der Woude (1972) on Holland, Faber (1972) on Friesland and Roessingh (1964) on the Veluwe. Theo's contribution on the population development of State-Valkenburg during the 18th century included the processing of church register data, episcopal visitations and the population censuses of 1796, 1799, and 1815. Discussing total population development and the relative contribution made to it by births, deaths and migration, Theo concluded that the demography of the Valkenburg area resembled other sandy areas, situated in Friesland and the Veluwe. He found on average one more birth per marriage in Valkenburg compared to Holland. Trying to explain this, he was tempted by a speculation that would be of great importance in his future research: "This difference, *probably caused by the effect of Catholicism,* explains why the population continued to grow, in spite of a rise in mortality" (Engelen, 1977, p. 109).

Finally, in 1979 a summary was published of the final paper written by Engelen & Meyer (1979) on forced marriages in the rural parts of the Netherlands in the period 1812-1862. It appeared in the famous Wageningen series *AAG Bijdragen*. Their line of reasoning was related to studies by the Wageningen sociologist G. A. Kooy, who analyzed the phenomenon of forced marriage in the middle of the 20th century. Religion was an intriguing element here. In 1812, the share of forced marriages in the Roman Catholic village of Boskapelle was about 12%, but in two Protestant villages it amounted to 24%. In 1862 this difference still existed, although both per-

centages were somewhat lower. Catholic priests, the authors argued, were able to put more pressure on the population. Youngsters had to go to confession regularly, and were expected to acknowledge what rules they had violated. Forced marriages were over-represented in lower social classes. The authors also found that the relative share of forced marriages over time showed a consistent correlation with changes in food prices (Engelen & Meyer, 1979). Much later, Jan Kok reopened the discussion of the mechanisms explaining different municipal levels of forced marriages, referring to differences in the 'disciplining' role of the family fund, the possibility of children receiving an inheritance from their parents, as well as the existence of intergenerational conflicts (Kok, 2011).

On 1 February 1982, Theo Engelen joined (in rather turbulent circumstances) our research group at the department of Economic and Social History (see the contribution of Brabers in this volume). The group was not unknown to him, because he had previously served as a temporary replacement for Dr. Wil Maas, a member of the department. Theo's arrival had become financially possible due to the departure of the scientific assistant Jos Perry, in September 1981. The nomination of Theo was accompanied by considerable resistance from students who would have preferred the appointment of a researcher working on the history of social movements, as Jos Perry had done (Perry, 1983). Fortunately, this resistance soon abated, which was due in large part to the fact that Theo as a person was well known and appreciated by the students of ESG.

A problem that would continue for many years was a long series of austerity measures imposed by the Executive Board of the University, beginning in 1980. In the late 1980s the pressure would increase as a consequence of a quite rapid decline in the number of students enrolling in the Faculty of Arts and in the sub-faculty of History. On top of this, our ESG department consisted of only 20% of the staff of History, but it served 40% of the students. Therefore, Theo's transfer from the sub-faculty to the ESG department did not really improve his chances of doing research.

With about 120 students, distributed over three years of teaching, the deployable ESG staff included four seniors: Paul Klep (head), Loet Bots, Wil Maas and Theo Engelen. Another senior, Hubert Nusteling, was assigned a special task consisting of research and teaching in the Faculty of Social Sciences. Expiring contracts included those of Frank van der Maden (March 1982), Joan Hemels (April 1982), Frank Schuermans (December 1982), Els Kloek (September 1983) and Hans Hillebrand (September 1985). Ria Nillesen was the much praised secretary of ESG (KDC, Inv P. Klep, nrs 347-361).

Due to an excessively heavy teaching load, the ESG staff had some hope of asking some staff members of other History Departments in Nijmegen to teach particular ESG topics. However, since socio-economic historical knowledge was not widespread, this did not lower the teaching load significantly. As a consequence of the cutbacks, another approach was tried: to restrict the scientific-didactic profile of ESG more explicitly to connections with historical sociology, demography and economy, as well as with quantification. Students who opted for rather 'soft' ESG papers (more or less political or cultural, without explicit social or economic theory, and without quantification) were asked to find a supervisor elsewhere, but most of them refused to do so. A restriction of the choice of themes and methods was not well accepted in those days. As a result, the very excessive teaching load continued for many years (KDC, Inv P. Klep, nr. 180).

In 1981 – the year before Theo's arrival – the teaching program of ESG had started to encourage the students to learn more about historical demography. Hans Hillebrand designed syllabi like 'Sociologie als bijvak (Sociology as a minor)' en 'Statistiek als hulpmiddel voor de historicus (Statistics as an instrument for historians)', while Paul Klep wrote the syllabus 'Historical Demography and ESG' (KDC, Inv P. Klep, nrs 53, 435, 883, 886). His doctoral dissertation and various other publications focused on population developments related to changes in the occupational structure and the urban ratio in the Ancien Regime and the early nineteenth century.

Hans Hillebrand (a part-time teaching assistant since February 1981) offered a crucial social science input to the ESG group. After various temporary assignments he left ESG in November 1986 to join the Landbouw-Economisch Instituut (LEI), where he began to run the section for Spatial and Regional Policy. He continued to produce co-authored scientific contributions with Theo. Hans Hillebrand defended his doctoral dissertation on historical demography in Nijmegen in 1991 (Hillebrand, 1991).

For his scientific development, the cooperation with Hillebrand and also with Boonstra became very important to Theo. The Groningen sociologist Onno Boonstra had worked in Wageningen in Van der Woude's group, and had been contracted by the sub- faculty of History in Nijmegen to develop a new teaching program on Historical Data Processing and Information Technology (for his career in Nijmegen, see Klep, 2017). His research included the 19th-century demographic transition and the collection of population data in the Netherlands (Boonstra & Van der Woude, 1984). In his doctoral dissertation, defended in Wageningen and

supervised by Ad van der Woude, the implications of literacy were investigated with respect to social mobility and geographic mobility, as well as fertility, nuptiality and mortality (Boonstra, 1993).

After his arrival in early 1982, Theo started to teach in the first and third years of college, as well as in the final program. From December 1983 onwards he also took student examinations on academic reading lists like 'Algemene Bevolkingsgroei (General Population Growth)', 'Geschiedenis van de sexualiteit en het gezinsleven (History of Sexuality and Family Life)', and 'Geschiedenis van de arbeidersbeweging en het socialisme (History of the Labor Movement and Socialism)' (KDC Inventaris P. Klep, nr. 180).

28 In September 1981 a long term research program of the ESG Department, 'Arbeid in Transformatie' (Labour in Transformation), had been applied to the Faculty and was eventually designated as 'protected' in 1982. At that time, we did not yet know that this 'protection' would turn out to be more or less symbolic. Devised by myself, as the head of the ESG Department since 1979, and discussed by the staff, this program managed to include most current research topics at the time, all related to aspects of labor and population. I had worked previously at Leuven University with Herman van der Wee on 17th- to 19th-century population growth, rural labor markets, the family economy, impoverishment, and urbanization.

By focusing on historical changes in labor, family and population, this 'protected' program gave some common orientation to the ongoing research and the beginning of new projects. From 28 October 1982 onwards, regular monthly papers were given in our Postdoctoral Workshop AiT to an audience of researchers and doctoral students. On a number of occasions, Theo Engelen, Onno Boonstra and Hans Hillebrand contributed papers discussing matters of historical demography: Theo Engelen's 'The decline of fertility and the rise of industry in Limburg 1879-1940' (24 March 1983), Onno Boonstra's 'Fertility in the Netherlands, 1850-1890' (14 April 1983), Theo Engelen's 'Changes in fertility: labor and other factors' (22 January 1985), Theo Engelen and Hans Hillebrand's 'Fertility and nuptiality in the Netherlands, 1850-1960' (12 November 1985), and so on (KDC Inv. P. Klep, nr. 357, Report Labor in Transformation 1983-85, p. 20-21. Nrs 347-361, Annual Reports ESG and AiT 1981-1990).

However, writing a doctoral dissertation with so many teaching obligations turned out to be quite impossible. An application for a Faculty Research Scholarship was successful, and this turned out to be a great

success. Two free research years from November 1984 to October 1986 gave a real boost to Theo's research output. He not only finished his dissertation (Engelen, 1987), but three other historical demographic publications were also published: a critical study of demographic data on Limburg in the period 1879-1889 (Engelen, 1986), an important article in Population Studies (Engelen & Hillebrand, 1986a), and a local urban study into fertility changes based on family reconstitution (Engelen & Hillebrand, 1986b).

His doctoral dissertation, 'Fertiliteit, Arbeid, Mentaliteit. De vruchtbaarheidsdaling in Nederlands-Limburg 1850-1960' (Fertility, Labour, Mentality. The decline of fertility in Netherlands-Limburg) was defended on 10 September 1987 (Engelen, 1987). In this work, he attempted to examine the relative importance of 'economic motivation' and 'mental acceptance' to explain municipal statistical variation in levels of marital fertility, as well as in the speed of changes within municipalities between 1850 and 1960 to a lower level of marital fertility. The economic motivation for lower levels of fertility would appear if the share of industry and other modern sectors rose, as well as if women were working more outside the home. In these rather new sectors, the cost of raising children would give an impulse to new behavior, especially in a context in which social changes of mentality were rather easy, measured by Theo as non-Catholic electoral preferences.

August 2007: Crossing meadowland during the annual ESG trip (Coll. P. Klep)

By addressing this topic he attempted to solve a persistent debate from the 1950s between Dutch geographers and sociologists, such as E. W. Hofstee, F. van Heek and J. D. Buissink, on how to explain the slow fertility decline in the Netherlands. Hofstee (1954) stressed that after the collapse of a traditional way of restricting marriage during the 19th century, a demographic regime, characterized by a much lower age of marriage, a decline in the number of unmarried people, and a sharp rise in marriage fertility occurred. The reduction in the number of births within marriages was caused by declining death rates and the desire of parents to improve their living conditions. Van Heek (1954) argued that a specific religious factor had to be taken into consideration. The distinctive slow decline of fertility among Roman Catholics (who upheld traditional ways of life) led to a level of fertility in the Netherlands that was much higher than that of surrounding countries, he argued.

In the sixties Ansley Coale started the famous European fertility project in Princeton. In 1984, national studies on Portugal, Italy, Germany, Belgium and the UK were completed, but they did not offer a common, verifiable model of fertility change. Lesthaeghe & Wilson (1982) were progressing by formulating two basic conditions for fertility decline: motivation, caused by the declining economic usefulness of children to their parents, and the degree of social acceptance of new behavior, determined by individualization and secularization.

In his doctoral dissertation, Theo made a fundamental shift from descriptive statistics to probability. He developed a new quantifiable and verifiable model. Although Limburg was a province that was homogeneously Catholic in confessional terms, the variation in births per 1000 married women in the period 1879-1910 was considerable. In brief, Theo could explain this mainly by differences in economic circumstances and levels of infant mortality. Differences in the rate of the fertility decline (a process that started as late as about 1900 and in many municipalities only after World War II) were contributed to the presence of traditional Catholicism versus modern mentalities. Nevertheless, a significant number of differences in the decline of fertility between municipalities remained unexplained. Since these unexplained differences showed geographical clustering, Theo concluded that different 'regional traditions' must have played a role (Engelen, 1987, p. 14-16, 194-197).

His work was highly appreciated. It was qualified 'cum laude' and Theo captured the Study-Prize of the Praemium Erasmianum Foundation in Amsterdam in 1988. However, on 17 September 1987 the Director of the

Faculty of Art informed Theo Engelen that as a result of reorganization he was not placed in the formation of the Department in 1990, and therefore would be confronted with dismissal in 1989. This happened one week after his successful defense. The reason was that the ongoing decline of students would diminish the theoretical teaching load of the sub-faculty of History from 32,5 full time units to 19,7 in 1990 (KDC Inventaris P. Klep, nr. 725 & 1384). Fortunately, his position could be preserved. The University Board of Nijmegen, as well as the Faculty of Arts, which had been involved with the Posthumus Institute since 1988, had guaranteed the research capacity of our Nijmegen research group.

This Posthumus Institute was a Dutch network of universities in which postdoctoral training and research had been integrated. In the spring of 1986, professors Theo van Tijn (Universiteit Utrecht) together with Richard Griffiths, Joan Sutherland (Vrije Universiteit Amsterdam), Catharina Lis, Peter Geschiere (Erasmus Universiteit Rotterdam), Ad van der Woude (Wageningen Landbouwuniversiteit) and I had successfully submitted a plan to the Ministry of Education to start a national training program for doctoral students in the field of economic and social history. This program started on 1 January 1988 and became well known as the N.W. Posthumus Institute. It was extended with a European Training Program, called ESTER. Theo gave many lectures about Historical Demography in these new doctoral schools. Even more importantly, Posthumus also became an inter-university Research Institute with its own directors. In 1993, austerity cuts were once again being made, but this time the Executive Board of the University had (without a hint of irony) created a reserve called Stimulus Funding.

In the ten years since 1982 Theo Engelen had earned an excellent scientific reputation, which made it rather easy to obtain further funding for his research. Furthermore, in the Posthumus Institute, Theo was appointed in 1993 to the role of director of one of the Posthumus national research groups: Changing Labor Relations in a Comparative Perspective, Western and Non-Western (later called Household and Labor). His co-director was the non-western historian Michel Baud (up to 1996) and, after 1996, Jan Kok. In April 1993 the Faculty of Arts received ƒ 100,000 from the Posthumus Institute to finance this scientific directorship for Theo in 1993-1994 (KDC Inv P. Klep nr. 225). The Manager of the Faculty of Arts made clear that if the sub-faculty of History were to suffer further cut in the future the faculty would in any event maintain the position of Dr. Engelen (KDC Inv P. Klep, nr. 1384).

June 2009: A conversation during the annual ESG trip. From left to right: Paul Klep, Theo Engelen, Wim van Meurs and Jan Brabers (Coll. P. Klep)

His doctoral dissertation of 1987 was certainly not his last research activity on historical changes in Dutch nuptiality and fertility. In 1997 he published an article on developments in Limburg, now from the perspective of individuals rather than regions or municipalities (Engelen, 1997). In 1998 he, together with Onno Boonstra, obtained an NWO investment subsidy to develop a historical database containing municipal demographic, social and economic information for the period 1812-1970. In 1999, this initiative was transferred to the autonomous Foundation Stichting Historische Databank Nederlandse Gemeenten.

Also in 1999, he extended his topic of regional patterns of nuptiality to the whole of Europe in a volume published by the CORN network of historians, in which he discussed the inter-related factors of economic growth and cultural transformation (Engelen, 1999). He paid special attention to John Hajnal's concept of a European Marriage Pattern with its so-called positive checks, the most important of which was the delay of marriage. In Hajnal's view this delay was the consequence of the need to establish a costly independent livelihood, which was again highly dependent on the speed of economic growth. However, the countries east of the line between St Petersburg and Trieste kept their specific characteristics of high nuptiality and fertility, because new couples remained within the family. Theo

also discussed the recent development of cultural individualism. Young people still had to deal with the limits imposed by the resources available, with low fertility as a consequence (Engelen, 1999).

Family Strategies, a concept closely related to nuptiality changes, became a new topic of Theo's, especially within the Posthumus context. In 1994 he published with Michiel Baud five essays on the history of labor and family in which family networks and labor strategies were discussed as vital means of survival and reproduction. This volume was highly critical of the use of Chayanov's famous concept of 'Family Economy', as well as of the usual method of historical analysis which was too much aggregated and on a macro-economic level. On the basis of micro-data, they argued, the structuralist approach should be converted into one in which human agency was essential (Engelen & Baud, 1994).

In 1996 some crucial developments occurred. At the first European conference of the Social Science History Association in Noordwijkerhout Theo presented with Michiel Baud and Ad Knotter sessions on 'Family Strategies'. In 1997 papers were published in *The History of the Family* (Baud & Engelen, 1997), a journal on which Theo succeeded Tamara Hareven as (co-) editor. To encourage further research on the micro-level of families, three postdoctoral projects on Labor Strategies of Families were begun by Ad Knotter, Jan Kok and Richard Paping. The ultimate goal was to achieve a better understanding of the historical workings of families and to apply the ongoing concept of 'family strategies' to the hard reality of historical micro-records of individuals and their families. Results of this human agency approach were published in 2002 and 2004 (Engelen, 2002; Engelen, Knotter, Kok & Paping, 2004).

The same Posthumus Program had a comparative western/non-western outlook. Thanks to contacts in 1994-1995 with the anthropologist Arthur Wolf (Stanford University), it became clear that for micro-historical research at the level of individuals and families, rich sources were available in Taiwan. The old population registers of Taiwan–, which bore a close resemblance to the registers in the Netherlands, made it possible to construct a large data set, which offered possibilities of comparison with data from the Netherlands.

After conferences held in Nijmegen (June 1995), Stanford (November 1995), and Taipei (January 1996), Theo prepared in September 1996 with Arthur Wolf and Chuang Ying-Chang (director of the Academia Sinica in Taipei) a research proposal titled 'Population and Society in Taiwan and the Netherlands' in order to obtain subsidies from the Chiang Ching-kuo

34 *During a visit to Taipei in April 2008. From left to right: Chuang Ying-Chang (director of the Academia Sinica), Theo Engelen, Peter (Chung-Yu) Wu (President of the National Chiao Tung University), and Paul Klep (Coll. P. Klep).*

Foundation for International Scholarly Exchange. The application turned out to be very successful and f 500,000 was made available in 1998. The group organized conferences on the Hajnal Hypothesis (in Stanford, 1999), nuptiality (in Boxmeer, 2001), fertility (in Taipei 2003/Berlin 2004), and mortality (in Stanford, 2006) (KDC inv P. Klep nrs 92 & 1384).

In 1995-2000 and 2003 Theo spent research periods at the Ethnological Institute of the Academia Sinica in Taipei. In 2004-05 he was a one-year visiting Research Fellow in Taipei. From 1995 until now, he chaired the project and an impressive series of volumes called *Life at the Extremes* was published (This series started with Engelen & Wolf, 2005).

A final recognition of his outstanding work was obtained by Theo Engelen in 2005, when he was appointed in Nijmegen to a personal chair in 'Historical Demography'. His international reputation made it easy for me to suggest to the Dean of our Faculty, Professor Hans Bots, that we create a personal professorship for him. This newly developed scientific field in Nijmegen was unique in the Netherlands and even in Europe. It was also highly desirable that Theo would be appointed to a professorship because of the fast-growing number of Ph.D. students in and outside Nijmegen in this field, and the necessity of acquiring further subsidies from foreign scientific bodies. Many distinguished colleagues both within and outside the Netherlands supported my application.

In 30 years Theo had made a big difference. Not only did he enlarge his scope of scientific work from Limburg to the whole world, but he also developed his methodological skills in a splendid way. He began as a student working with the construction of simple datasets of births, death and marriages, and gradually applied more sophisticated ways to analyze the interaction of demographic, economic, social and cultural variables. His work culminated in the use of complex models and probability statistics. However, he remained a historian able to explain everything in very understandable language, and with a nice sense of humor. At the coffee machine of Economic and Social History he would deploy subtle understatements and calculated exaggerations, suggesting future mischief and catastrophes. The funny part was that very often these things really happened. If he said that he had predicted all this trouble, we would all burst into laughter.

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[2]

JAN BRABERS

'Political intrigue at the Catholic University of Nijmegen'

The student movement and the contentious start of the academic career of Theo Engelen, or how the meek shall inherit the earth after all

INTRODUCTION

In December 1981, the Dutch national weekly *De Groene Amsterdammer* published an article in the section 'Klein wetenschapsvuil' ('Small science dirt') entitled 'Politieke intriges aan de Katholieke Universiteit Nijmegen' ('Political intrigue at the Catholic University of Nijmegen') (Politieke intriges, 1981). The title referred to the events regarding the appointment as assistant to the research group 'Economische en Sociale Geschiedenis' (Economic and Social History) of a young historian named Theo Engelen. According to *De Groene*, Professor Paul Klep, the head of the research group, had used all kinds of machinations to prevent the appointment of the designated candidate Bob Reinalda, a Marxist political scientist who specialized in the history of labor and the labor movement. For these latter qualities Reinalda was favored by the students. With the help of underhand tactics, trampling on procedures in the process, Klep succeeded in pushing forward the inexperienced Engelen, at the expense of the supposedly troublesome, left-wing Reinalda – 'a scandal', said *De Groene*.

Thus Theo Engelen, a 31-year-old who had barely started his academic career and did not have a doctorate, unintentionally and in spite of himself appeared in a dim light in a national magazine. In Nijmegen, the local press had already paid much attention to the case in the preceding weeks. Among history students 'all hell had broken lose', when the plotting of Professor Klep had sunk in, *Tegenspraak* pointed out (Het gat van Nijmegen, 1981). This left-wing political and cultural periodical, which focused on the Nijmegen university, openly tried to disqualify Klep by neatly adding that he himself was 'still very young and Catholic' and 'only recently admitted to the degree of doctor'. According to *Tegenspraak*, stu-

dents refused to reconcile themselves to Engelen's appointment and threatened to hold lightning strikes and even to occupy the History Department. Even *KUNieuws*, the official, and neutral, magazine of the university, cried shame over the 'unedifying spectacle' provided by the Economic and Social History research group. Klep's mismanagement had led to the appointment of Engelen, a man who did not have 'the foggiest notion' of the history of the labor movement (Keulers, 1981).

Considering the seemingly trivial importance of the appointment of a research assistant, the attention that this particular appointment received in the local press, and even in a national paper, can at the very least be deemed surprising. The same goes for the accusations of foul play and the harsh words and shrill tones employed in the newspaper articles and, of course, for the vehement reaction and threats of the disgruntled students. Long-term, more or less structural causes, dating back to the rise of the student movement at the Nijmegen university around 1970 on the one hand, and a series of recent, rather sordid events within the History Department on the other, can provide an explanation.

THE STUDENT MOVEMENT

The student movement of the 1960s originated in dissatisfaction with the old, traditional, elitist university. A rapidly growing number of men and women, coming from an increasingly wider social background, populated the universities. They were born during or after the Second World War, the first generation for whom the welfare state and democracy were a given. The 'Movement of '68' could permit themselves to turn against the welfare state and the 'hypocrisy' of the existing political system (Vos, 2011). In the Netherlands, the student movement appeared on the scene in the spring of 1969, when government plans for technocratic reforms of the rapidly expanding universities provoked massive student protests. After a series of debates, accompanied by student demonstrations, sit-ins, occupations of university buildings and other actions, the government fairly quickly gave in and put forward a *Wet op de Universitaire Bestuurshervorming* (Universities Administrative Reform Act) in 1970. This reform act is referred to as 'probably the most far-reaching academic democracy exacted by a student movement in the 1960s' (Vos, 2011, p. 295). It gave students a say, or even the right of consultation, at practically all levels of university policy – formally, that is, because in practice these ideas still had to take shape.

Remarkably, students with a religious background turned out to be more open to engagement in the 'Movement of '68'. As a rule, this phenomenon is attributed to the fact that under the surface of the movement there existed an ethical element, a 'religious structure of feeling' (Vos, 2011, p. 303). The student protests of 1969 started at the Catholic universities of Nijmegen and Tilburg. Only later did their counterparts in Amsterdam and other university towns follow suit. When the attention of students was increasingly directed at social evils outside university a year later, from cultural deprivation in local working-class districts to the suppressed masses of the Third World, this was particularly noticeable in the city of Nijmegen. A sizeable, many-branched and variegated counterculture began to flourish in this provincial town situated in the east of the country on the river Waal. Students were involved from the start of various activist movements, varying from the feminist movement to the squatters' movement. Nijmegen in the seventies was a scene of 'tien krejatieve aksiejaren' ('ten years of creative action') (Timmermans, 2007). From being the 'Rome of the north', as it was once called due to the presence of the Catholic University, it was now quickly transforming into 'Havana on the river Waal', due to students of that same university, who practically overnight turned from Catholics into Marxists, and who dominated cultural life in the city.

At the same time, the student movement in Nijmegen, like those elsewhere, fell victim to fragmentation. In particular, the emergence of Leninists provoked the movement into warring parties of 'cadres, cliques and sects' (Vos, 2011, p. 297). In Nijmegen, at least three political factions fought just as hard against each other as they did against the common enemy, the capitalist establishment. The 'Unie van Studenten te Nijmegen' was literally a sort of trade union, advocating student interests and 'battling right-wing politics' in councils at university or faculty level. The 'Marxistisch-Leninistiese Studentenbond', affiliated to the proletarian 'Socialistiese Partij', was convinced that students had to place themselves at the service of the working classes, or else had to leave university and become working people themselves. The 'Socialistiese Studentenbonden', on the other hand, were trying to develop 'a socialist practice for intellectuals' (G.S., 1973). They advocated 'systematic criticism' of conventional (or 'bourgeois') learning and the study of socialist learning, and fought against a restructuring of the university which would limit the freedom of students. These Studentenbonden were organized by faculty and had the largest following of the three. In the History Department, a division of the Faculty of Arts, such a union was active under the name of 'Aktiekern'. In

short, in the early seventies the student movement underwent a transition from utopia to ideology, that is, from spontaneity to rigid party organization. Still, on occasion these parties worked together, as we shall see.

With an unprecedented self-confidence, left-wing students applied their influence to build a better university – and a better world, for that matter ('study at the service of the people' was a common slogan). A central theme in student politics, especially in the first half of the seventies, was the appointment of Marxist professors and assistants. Conflicts with the authorities, who in general had other interests and ideas, were commonplace at the time. Whenever students could not reach their goals by formal means, i.e. by the voting system in university or faculty councils, which was often the case since students were outnumbered in these bodies, they often decided to try other means. Several plans of action were available. In ascending order of severity, often employed simultaneously, they could send letters to editors, submit petitions, put up posters and banners, compose and publish 'black books' (zwartboeken) protesting against injustice, organize manifestations and panel discussions, hold mass demonstrations and sit-ins, disrupt meetings of boards, organize lightning strikes or short occupations, and finally keep university buildings or departments occupied for a lengthy period of time. These long-term occupations were of course the most severe and disruptive measure, but after a while even the news that students were setting up a new action committee could fill administrators and professors with trepidation.

In line with the 'red' image that the city of Nijmegen acquired in the seventies, the student movement also gave the Catholic University the reputation of being a place of turbulence and turmoil. Yet, in actual fact, student activism by way of prolonged occupation of buildings or departments was rather erratic, as can be shown by a simple reconstruction, based on systematic research in university and student periodicals.[1] In 1969, the year in which it all began, students occupied a university building seven times, most commonly the auditorium and the academic main building (the seat of the board). Their demand was put forward in general terms: democratization of the university. In the course of the following year only twice was a building occupied, and one of these occasions was merely a frivolous act. The editorial office of the *Nijmeegs Universiteitsblad* (a magazine which functioned as the voice of the radical students) was taken over by 'kabouters, oranjevrijstaters, subkultuurders' (different groups of Provos), who by way of 'happenings' protested against the shift to the left that this periodical had taken. 1971 saw no occupations at all, while in 1972

there were three. In hindsight, the demands sometimes look downright ridiculous. One of the occupations in 1972 concerned the 'Instituut Sociologie' (the institute of Sociology) which was taken over by first-year students for nine days. They called for the removal of a course on 'methodology' from the curriculum, because in their view it was 'not fit to select students upon'. Methodology was just 'an expression of the total curriculum', according to these self-assured freshmen, and that curriculum 'as it happens gives no insight in society whatsoever', they claimed.

In 1973 a number of records were set: there were twelve occupations that year, eleven of which took place simultaneously in May and June, and the 'Instituut Politicologie' (the Institute of Political Science) was occupied for no less than 105 days in a row. Total chaos had apparently broken out. The immediate cause was the series of attempts made by professor of political science Andries Hoogerwerf to prevent the appointment as researcher in his department of Bob Reinalda, the same political scientist whose candidacy would play a role in Theo Engelen's case eight years later. Hoogerwerf wanted a vacancy in his department to be filled by a theorist of political science. The students of the Socialistiese Studentenbond Politikologie, however, sought the appointment of a Marxist political scientist, who would oppose 'bourgeois' learning, and their desire was backed by a majority decision of the council of the Department of Political Science. When it appeared that Hoogerwerf, operating behind the scenes, was able to circumvent this decision, students decided to occupy the Institute of Political Science. Soon students of other disciplines, varying from mathematics to Dutch literature, followed suit and occupied their departmental offices out of solidarity with their friends in political science. As well as seven institutes, four central offices were also occupied. All of the abovementioned political factions, the Unie van Studenten te Nijmegen, the Marxistisch-Leninistiese Studentenbond and the Socialistiese Studentenbonden, for once worked together harmoniously. For a while, academic life practically came to a standstill. Some of the actions only came to an end after violent interventions by the police. 'De zaak R.' (the case R.), named after the student's hero, was the talk of the town and received comprehensive national press coverage. The stream of defamatory pamphlets on the case was turned into a 'black book' titled, 'Zwartboek van het konflikt rond de benoeming van R.', and had a circulation of 3,000. The conflict ended in a sort of truce, which made it possible for both parties to claim victory. Clearly, the students had reasons to be cheerful: Reinalda was appointed, albeit under all kinds of conditions and not too close to Hoogerwerf.

In the following year the Catholic University had to cope with nine occupations, including (for the first time) that of the History Department. History students went into action in April out of solidarity with those in the faculty of Social Sciences who fought against the suppression allegedly reigning in their quarters. With the badly planned occupation of the Erasmus building, the tallest building of the university, on May 9, a low point was reached. The Secretary of State for Education and Science, Ger Klein, who was invited to Nijmegen to officially open the new Erasmus building, and his high-ranking following, upon their arrival found the doors were closed. Inside, behind the glass windows, were only some of the activist students (the rest of them were locked out as well), together with drinks and a music group for the planned reception. The only reason behind this action was to show the Secretary of State that Nijmegen students were forceful and would not be walked over. After this fiasco a period of relative calm dawned. In 1975 no real occupations occurred. Yet there was turmoil enough after the Board of the university released a memo saying Catholic candidates for professorships would be favored ahead of non-Catholics. In protest, left-wing students several times tried to occupy the auditorium, but each time they were kicked out almost immediately by the police and once or twice also by members of the student fraternity Carolus Magnus, who were of a different political persuasion.

In 1976, after two years of abstinence, there were two occupations. The first one, in May, was greeted with undisguised joy in the *Nijmeegs Universiteitsblad*. The first paragraph of the relevant article, entitled 'Hooray, hooray, occupation!', went as follows: 'Those who had hoped that occupiers would be extinct by now, or perhaps had graduated, are in for disappointment. A few warm days, and the first occupation is a fact. In protest against the increase in their workload, second-year students of sociology for a period of three days remained behind barricaded doors in their institute. Enthusiasm all over the university: finally something is happening again. Declarations of solidarity pour in. There's a party going on. There's an occupation' (Brounts, 1976). This was a clear case of what might be called occupation nostalgia. Yet, perhaps old times really did return. On the surface, at least, it appeared that way during the following two years. In both 1977 and 1978, students occupied buildings or offices on six occasions. Their motives varied widely, from protests against the threatening introduction of a university disciplinary law, to protests against the prevailing situation of understaffing at many departments. But the atmosphere had changed and hardened. On several occasions the police inter-

vened. More and more there was material damage; buildings were daubed with paint and after a short occupation of the auditorium (for the umpteenth time) ceremonial gowns of professors were stolen and a crucifix was damaged.

The good times were definitely over. In the following year, 1979, students occupied a building only once. The last convulsions of the revolution occurred in 1980, when in November five buildings were occupied by students protesting against government plans for the 'Tweefasenstructuur', which aimed to reduce expenditure and drastically reorganize and, above all, reduce and shorten the study programs. The students, in this case often backed by their professors, feared an increase in their study load, as well as the standardization of the study program and of testing. The protests, connected with a nationwide campaign between November 24 and 29, were to no avail; the Tweefasenstructuur would be introduced a couple of years later. Soon the student movement lost all momentum; occupations became rare phenomena.

TROUBLES IN THE HISTORY DEPARTMENT

Almost to their own surprise, history students played a large part in the above mentioned protests in Nijmegen against the 'Tweefasenstructuur' in November 1980. History students managed to occupy the 11th, 12th and 13th floors of the Humanities Building, the Erasmusgebouw. They were organized in 'StuG' (an abbreviation of 'studenten geschiedenis'), a body of critical and activist history students founded only in 1979, as a late successor to the socialist Aktiekern. StuG had about forty active members out of 700 history students in total. Normally, all the 'dissatisfaction' was concentrated in the StuG-meeting room on the 12th floor (E12.02 A), a musty hole containing lots of junk and a mimeograph. Now, in November 1980, StuG had succeeded in turning out a crowd. In comparison with students of other disciplines, the historians-to-be were overrepresented numerically and had a large say in the decision-making process. They even managed to claim their own (12th) floor as 'Historiese Vrijstaat' (History Free-State), where they experienced ten days of fun in smoke-filled rooms, with lots of booze, 'talking, dancing, drinking beer, and falling in love', as two of them reported afterwards (Van Raaij & Ter Borgt, 1980). Occupations simply 'maintain a hippie-like atmosphere', they added, romanticizing the Age of Aquarius of the previous decades.

But of course it wasn't all just fun. StuG issued a 'Manifesto' to the boards of the History Department and its subsections, demanding for students the right to participate in the decision-making process on matters relating education and research, and to arrange their own study program as freely as possible (KDC Inventaris, P. Klep, nr. 178). They underlined their demands with an ultimatum: the boards had to respond in writing before December 8. 'Vague promises' were unacceptable. 'We demand specific arrangements concerning the eventual implementation of the aforementioned demands', StuG stated in a typically pretentious hostile fashion, which was not unusual for those days. The chairman of the History Department, Mathieu Spiertz, a professor in the history of Dutch Catholicism and a soft-hearted man, responded by giving tit for tat (KDC Inventaris, P.Klep, nr. 178). He admitted to understanding, even sympathizing with the resistance against the Tweefasenstructuur, but rejected the occupation because it prevented the continuation of duties and he feared for damage to property. Students should understand that the staff considered the occupation a violation of privacy. He made it clear that he refused to have a discussion under this pressure and cleverly reminded the students that a year and a half ago the History Department had created the opportunity to discuss the curriculum reduction, which had been attended by only fifteen students. He kindly requested the students to end the occupation. That, of course, fell on deaf ears.

This exchange of letters illustrates the atmosphere within the Department of History, sometimes resembling trench warfare more than anything else. The complaints of students could be manifold. 'As soon as one leaves the elevator on the 12th or 13th floor of the Erasmus building, stale air hits you in the face. Abandoned corridors, deadly quietness,' as one StuG leader wrote in 1981. According to him, all professors and staff members, with a few exceptions, were old-school historians, bourgeois 'fact fuckers' and craftsmen, right-wing Catholics, conventional empiricists and positivists with no interest in theory and philosophy at all – and they had gotten their positions only as a result of cooptation and inbreeding. 'Whoever studies history here in Nijmegen fares poorly…' etc. (Van Raaij, 1981). Perhaps here and there this litany of complaints contained a grain of truth, but in reality it was nothing but a caricature. Moreover, it cannot have met with widespread agreement, because otherwise the department would not have had about 700 students and a yearly influx of more than 150 students.

As an aside, it should be mentioned here that mutual relations between

professors and between other staff members within the History Department could sometimes be very bad. In this respect the department carried a certain reputation: the atmosphere was easily flammable. The reasons for this varied from conflicts of interest to personality clashes, envy and other human weaknesses. The fact that most staff members originated from Nijmegen itself – some were condemned to putting up with each other for their whole lives – was not unrelated to this phenomenon.

For students, a serious bone of contention was the limited impact of their representation on hiring committees. The skeptical and critical students were convinced that they were listened to only in compliance to the regulations that requested their presence, while the decisions were made elsewhere. In the Contemporary History section, for instance, which was headed by Professor Ad Manning (who incidentally, in the students' view, could not do anything right), in 1975 it looked like a left-wing academic would have a real chance of being appointed. Manning and his colleagues, however, wanted to prevent this 'at all costs', as the students wrote in hindsight. Upon realizing what was about to happen, 'all reason' vanished and 'the high lords' (Manning and co.) descended to a level of 'manipulation, intimidation and false accusations' (Een oud benoemingskonflikt, 1976). This kind of distrust was rampant, as is evident from an undated note (of May 1978) from students in the Economic and Social History section regarding who was to succeed professor P.H. Winkelman, who it was known would be leaving within a few months. The students labeled this situation 'an affair' at the very start, because they believed that the staff had tried to exclude them from the decision-making process and grant them only minimal influence (KDC Inventaris, P. Klep, nr. 723). Driven by the same cynicism, they successfully put pressure on the one student on the selection committee to resign beforehand, because they felt that the representation of students was hopeless whatever happened.

In the end, the succession to Winkelman turned out 'an affair' indeed, even without the presence of students on the selection committee. Chaired by Spiertz, this committee of five (including an external member, Bernard Slicher van Bath, professor of agrarian history in Wageningen) conducted a comprehensive and profound survey to find suitable candidates for the professorship (Archief Faculteit der Letteren, 00259). Unfortunately, the first preferred candidate withdrew, because the quarrelsome atmosphere within the section for Economic and Social History proved unattractive. Half a year later the newly preferred candidate suddenly withdrew his application, too, for more or less the same reason. He had been the favorite

of four members of the selection committee, a clear majority. However, the fifth member of the committee, Jos Perry, a Marxist historian, originating in the student movement and now an assistant in the Economic and Social History section, had written a minority report in which he utterly dismissed the committee's favorite and stated his preference for another candidate. This minority report was leaked, and this would have a devastating effect: the favorite candidate of the committee, shocked by what had been written about him, pulled out. Thereupon, Spiertz and the other three members of the committee, who had actually done a pretty good job, angrily handed in their resignations, a year after the committee had been set up. Precisely because this committee had done such a good job, the board of the Faculty of Arts, by now growing impatient, decided to simply appoint the next person on the list: Paul Klep, a 31-year-old alumnus of Nijmegen with a recent PhD (*summa cum laude*) from Leuven, Belgium, who had just started a job as research assistant at his alma mater. Understandably, this gave the impression that the procedure was irregular. Students in the council of the History Department cried shame and received support from some staff members, but the Faculty would not change course. 'Students are ignored, rules are bent', as the *KUNieuws* reported when Paul Klep was appointed reader (a few months later he became professor) in Economic and Social History (Studentensektieraadsleden van geschiedenis, 1979). In fact, neither of the two statements was completely true. Appearances were against the Faculty and that sufficed to fuel the mistrust of the students.

Simultaneously with the long procedure leading to the appointment of Klep in 1979, the non-appointment of Anton van Hooff as professor of classical antiquity evoked strong disapproval from students. Van Hooff had proven to be an excellent and well-respected instructor during the previous two years, when he had substituted for his professor who was absent due to sickness. He was extremely popular among students. However, his progression to full professor was sidetracked in a shady procedure. Nobody knew exactly what had happened, yet for many students it was further proof that the boards, whether those of the Faculty, the History Department or the section, were not to be trusted. This case, too, was the cause of upheaval in the local press.

TROUBLES IN THE RESEARCH GROUP ON ECONOMIC AND SOCIAL HISTORY

The relationships and atmosphere within the Economic and Social History section had not always been optimal under the latter years of Winkelman's professorship, to put it mildly. Among other things, the section and its members suffered from a constantly increasing workload. The situation worsened after Klep's nomination, since one of his senior staff members refused to acknowledge the authority of the new young chairman, out of displeasure at not being made professor himself, and as a consequence also refused to carry out his normal duties. The section was small as it was, but with only four remaining regular staff members (Lout Bots, Will Maas, Frank Schuermans and Paul Klep), it was now severely understaffed. Temporary contracts (for instance for Els Kloek and Jos Perry) and guest professorships (Joan Hemels, for example) had to make up for the shortage, but of course their number was limited too. The flow of students, however, was large and continued unabated. In the second half of the 1970s, Economic and Social History became hugely popular. The research group quickly became the section with the most graduates: 94 alumni between 1977 and 1982 (37 percent of all graduates in the History Department), followed by 66 graduates of the Early Modern History section and 63 in Contemporary History where the staff was better equipped. Also, every year around 40 third-year students aspired to write their Candidate's thesis within the Economic and Social History group, 'which exceeded the capacity of the staff by far' (KDC Inventaris, P. Klep, nr. 57). The looming introduction of the Tweefasenstructuur, which would increase pressure on staff and teaching still further, was not a happy prospect. As a consequence, the section's research program could barely be carried out and had to be partly neglected. On top of all this, the Faculty of Arts announced that it had to reduce the budget and that a recruitment freeze would be introduced. Due to circumstances outside his control, Klep's professorship had an immensely difficult beginning.

Yet, at the same time, the section's staff in the second half of the 1970s did not rest on its laurels and was constantly keen on improving and modernizing education, as documents relating to its meetings reveal (KDC Inventaris, P. Klep, nr. 723). Under the watchful eye of Spiertz, who acted as interim chairman of the section in the absence of the dysfunctional Winkelman, and later Klep himself, regular staff members and temporary researchers showed themselves to be not silent or grey historians at all, as

was suggested by some of the critical students. Instead, they worked hard and were open to innovation. Subjects of research and teaching, for example, were the relation between demographic growth and economic stagnation (the theme of Klep's dissertation *Bevolking en arbeid in transformatie. Een onderzoek in Brabant, 1700-1900*), social and economic thought in the eighteenth and nineteenth century (Bots), industrialization (Maas), the relations between population, family, labor and the economy (Schuermans), women's history (Kloek) and labor history (Perry).

THE APPOINTMENT OF THEO ENGELEN

In May 1981, Jos Perry announced his departure from the research group Social and Economic History, effective as of September that year. In response to this, the StuG wrote a letter to Klep, asking for a promise in writing that the vacancy would be filled by a specialist in the history of the labor movement (KDC Inventaris, P. Klep, nr. 178). Klep had fairly good relations with students (he was known as a 'progressive liberal') and was not looking forward to a fight, so he replied that the future hiring committee would indeed be instructed 'forcefully' to find such a candidate. And so, on July 15, an advert appeared in several national newspapers, asking for a staff member suitable for academic teaching, research and administration. The candidate should either be a socio-economic historian or a social scientist, with ample knowledge of social and economic history. A PhD, possibly in an advanced state, would be an asset. And, finally, 'an orientation towards the history of labor and the labor movement would be preferred'.[2]

Around that time and in the months ahead, the seriousness of the problem of the section's understaffing increasingly came to the fore. Based on the number of students, Klep's staff should have consisted of eight members, where probably nine were necessary, but in actual fact the section's personnel only comprised five members. In July 1981, they supervised a total of one hundred students preparing for their thesis, either at Candidate or at Doctoral level. The lack of staff was beginning to put academic standards under threat. It seemed that in the next academic year, which started in September, the education program of second-year students, as well as minor classes, were in danger of being skipped entirely. The influx of students, with an interest in economic and social history, coming from higher professional education, had already been discontinued momentarily.

In order to tackle (part of) the problems of both the research group and the Faculty, which had to cut its budget, in September the general administrator of the Faculty, Harry Borghouts, came up with an idea. Why not transfer Theo Engelen from his position as general staff member of the Department of History to the research group Economic and Social History? This solution was typically managerial: by putting Engelen in Perry's empty space, and at the same time not filling the position he vacated, it would kill two birds with one stone. The Faculty would take all responsibility, Borghouts assured Klep and the board of the History Department (KDC Inventaris, P. Klep, nr. 1384). It was an offer Klep could not refuse.

Needless to say, Borghouts gave this assurance, and Klep accepted it readily, because they knew problems were looming. A relatively minor problem was that Theo Engelen had not applied for the job. There was no doubt that Engelen was up to the task, as far as the teaching and administrative aspects were concerned. He had become a temporary staff member of the Economic and Social History section five years earlier, in April 1976, on the eve of his graduation, to replace the absent Maas, who had fallen sick. Since that time, Engelen had fulfilled all kinds of tasks: giving second-year lectures and tutorials (he also wrote a memorandum on revising the tutorials, proving his commitment), supervising theses, and managing the office staff. As a result, his contract was renewed several times. From 1978, Engelen was employed in the general staff of the History Department, where, among other duties, he served as secretary of the board. Every now and then he continued his tutorials and supervisions in the Economic and Social History section. Yet, up to that point, he had no reputation as a researcher, with only four publications, two of them, by the way, on demographic history. When informally offered the job, however, he said yes.

As could be expected, larger problems arose. How to proceed with the original vacancy? What about the applicants? In the course of September, prior to the launch of Borghouts' idea, the hiring committee, with three staff members and two students, and chaired by Klep, had come to the conclusion that none of the applicants was adequate for the job. The two student members, however, thought differently. They had found a clear favorite in one of the applicants: Bob Reinalda, the same political scientist who had been the protagonist of the legendary 'case R.', which had caused a wave of occupations back in 1973, during the heydays of the student movement. Since then he had been working at the Nijmegen institute of

Political Science, writing a PhD under the supervision of Ger Harmsen, a Marxist historian at Groningen University. Reinalda was now on the brink of promotion. He and Perry belonged to a small coterie of learned Marxists around Harmsen, who was a rather controversial figure, a hero of left-wing students and intellectuals and a source of scandal and conflict in other segments of the Dutch academic world (see for instance Harmsen, 1993). Reinalda had also caught the eye of Nijmegen history students, especially those who believed that studying the history of the labor movement was not a neutral activity, but 'a political choice' (KDC, Inventaris, HiStory, nr. 11, 1981, October 9). When they organized a thematic evening on the history of the labor movement in 1976, with the aim of starting a long-lasting project, for example, Reinalda was invited as their first and keynote speaker. And he obliged, giving an insightful lecture on his motives. Reinalda started by emphasizing his background: the student movement, which had caused political awareness in society and at the university. Radical students did this by demanding participation rights and by changing academic thought, by studying new subjects and producing new and different visions. The study of the history of ordinary people, of the labor movement, was important and relevant, Reinalda continued, because these people too had tried to change society by ways of reform or revolution. Yet, he noted, this type of history was not welcomed by universities in the Netherlands.

Regarding his latter remark, Reinalda was right, at least as far as the staff members of the hiring committee in 1981 were concerned. Studying subjects with an activist agenda did not fit the academic standards that Klep strove for in his staff. His main aim was to put together a coherent research group studying demographics, the labor market, industrialization, poverty and the functioning of households. The transfer of Engelen was welcomed in that regard also. When the StuG realized that Reinalda would not be appointed, however, of course the chips were down. A public announcement of a lightning strike to be held on October 8, 'because of the umpteenth appointment conflict', was illustrative of the students' anger. It ended with a loud and clear 'goddammit!'(KDC Inventaris, P.Klep, nr. 390). When they learned that staff in the meantime had developed a preference for an all-round historian, their reaction was likewise revealing. It would probably be 'someone with a one-sided view and limited understanding of academic learning, just like the rest of the current clique', it was said (KDC, Inventaris, HiStory, nr. 11, 1981, October 16). Rumor and suspicion ruled the 12th floor of the Erasmus building. At that point, Klep

made it clear that he was willing to talk to the defiant students, but only in official meetings and certainly not under the threat of an occupation. Following this, a core of determined students decided, firstly, to write a press statement, which ended up in the article entitled 'Series of appointment conflicts gnaws at the research group social history' (cited above in the introduction of this story), and, secondly, to begin a joint action consisting of a lightning strike and a short occupation of the section's premises in the Erasmus building, on the morning of Wednesday October 14. To their astonishment, when push came to shove, only a few students turned up. The conclusion had to be drawn that for some reason the zest had gone ('Animo viel erg tegen!!!!'). Later that afternoon, in an atmosphere of huge disappointment, it was decided to cancel all plans for further occupations (KDC, Inventaris HiStory, nr. 11, 1981, October 16). There was not going to be a second 'case R'.

Nonetheless, the failed student actions of October 1981 had a positive result as well. During the two or three lightning strikes, the idea of organizing a series of lectures regarding 'emancipatory history' emerged. With this series, the students meant to show the almighty staff that 'neutral history' did not exist. 'Any approach to a subject implies a position has to be taken. Social history cannot do without engagement and may never be depoliticized', as was asserted in typical jargon by 'Karla Nijdig, Friedrich Triest en de doorzetters' (1981/1982) (Carla Spiteful, Friedrich Sad and the diehards), who clearly had not yet come to terms with defeat. It was deemed important, as they also said, that staff should overhaul their 'limited vision'. The lectures, seventeen in total, turned out to be very successful as they were well attended, with lively discussions afterward. They went on throughout the summer of 1982 and had an impressive list of guest speakers: Ger Harmsen, Jos Perry, Siep Stuurman, Selma Leydersdorf, Herman de Liagre-Böhl, Joyce Outshoorn, Bob Reinalda himself, but also the (temporary) staff members Els Kloek and Joan Hemels. Afterward, the lectures were printed and published in three volumes of *HiStory*, the magazine of StuG. These editions of *HiStory* even had a positive reception in a national newspaper, although this was admittedly the Communist *De Waarheid* – which, by the way, took the opportunity to explain once more how unfair it was that Reinalda had missed out on being appointed due to the misdeeds of the powerful Professor Klep (Scheerman, 1982).

When the dust had settled, in November 1981, Klep's colleagues made some grumbling remarks about not endorsing the procedure which was followed, but at the same time they had no objections to the result (Archief

Faculteit der Letteren, L.07.52). One final matter had to be settled. Engelen had to consent to the condition, put forward by Klep, that he submit a promotion plan within three months of the beginning of his appointment per February 1, 1982. He did so more than readily.

CONCLUSION

In conclusion, one might say that conflicts such as the one resulting from Engelen's appointment, where students stubbornly attempted to get Marxist academics appointed, had a long tradition in Nijmegen. This particular case, however, occurred during the latter days of the student movement, when the revolutionary zeal had already mostly vanished. Looking back on the affair a few years later, a former left-wing activist student called the fiasco of October 1981 a pre-eminent example of the 'painful' downfall of the movement of history students (Sleebe, 1983/1984). In November 1980, just a year prior to the non-appointment of Reinalda, activist history students seemed to have the wind fully in their sails. 'The student movement seemed to wake up from its hibernation', *Tegenspraak* wrote nostalgically at the time (Van Raaij, 1981). But even then, no more than fifty to sixty students were really involved. Soon, these hardliners too were apparently suffering from fatigue and weariness.

The students of 1981 were not the only ones who tended towards misplaced feelings of what might be called 'occupation nostalgia'. *De Groene Amsterdammer*, usually a periodical of high esteem, in the above-mentioned article 'Political intrigue at the Catholic University of Nijmegen', were guilty of trying to add fuel to (a small) fire, in an attempt to bring back the good old times of 'case R.'. *Tegenspraak* even gave its article the title 'Geprolongeerd: 'R'' (Renewed: 'R'), referring to a case more than eight years old. Both articles, as well as those cited in *KUNieuws* and *De Waarheid*, were loaded with half-truths and misinformation. This was not necessarily the result of a lack of good faith (although that might have played a role too), but was more probably due to the silence required of a selection committee, given the candidates' need for privacy. On the one hand, this necessary confidentiality was not always respected, and on the other hand the required secrecy could easily fuel already suspicious minds. The result was a mixture of ill-informed and biased press releases. As a rule, controversy regarding appointments tended to become rather personal. Throughout its history, the student movement did not shy away

from ad hominem attacks – an unpleasant and rather petit-bourgeois trait. The left-wing press simply followed suit.

Then again, administration and professors often gave probable cause for students' outrage, and this was also true to a certain extent in the case of Engelen's appointment. The democratization of the university had given the students certain rights, which obviously complicated the administrative tasks of professors. Every now and then, these rights were circumvented, for example in order to speed up the decision-making process. What could students do, when their rights were not respected, but protest and fall back on procedures? In return, what could Klep do, confronted as he was with a shortage of staff, an obstinate staff member, the looming removal of essential parts of the study program, and the austerity demands of the Faculty? On top of all this, he had to operate in an atmosphere of distrust. Given his young age and inexperience, he was facing an almost impossible task. The prompt availability of Engelen, as a result of Borghouts' idea, seemd like a golden opportunity.

All this aside, the conflict did have two favorable results. The series of lectures organized by the rebellious students was a fine side-effect of their protests. With this, the student movement, which was on its way to being snuffed out like a candle, achieved a late positive feat. The second favorable result was, of course, the appointment of Theo Engelen itself. All things considered, the conflict was not about the person of Engelen at all, and neither about the personality of Reinalda, for that matter, but rather his politically biased views on academic research and learning. Soon after the start of his new role, Engelen presented Klep with the desired promotion plan. The result, a dissertation (cum laude) called *Fertiliteit, Arbeid, Mentaliteit. De vruchtbaarheidsdaling in Nederlands Limburg, 1850-1960*, would win him the prestigious Erasmus prize, and would be the start of an international career in historical research. In conclusion, it should be noted that Engelen, although not a Marxist, soon after February 1982 won the sympathy of students. He proved himself an approachable, easy-going teacher who, everybody knew, had had nothing to do with the vicissitudes of his appointment. If anything, this may be seen as proof that the meek shall inherit the earth after all.

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[3]

HANS HILLEBRAND

Collaborating with Theo Engelen in the eighties and early nineties

From 1974 until the beginning of 1981 I studied history at what was then called Katholieke Universiteit Nijmegen (now Radboud University). I specialized in Economic and Social History, and later in demography. It was during my bachelor's degree that I first met Theo Engelen. He was my supervisor in my third year and my tutor for my bachelor's thesis, in which demography already played an important role.

In 1981 I became a temporary member of the staff of the Economic and Social History group. At that time Theo was secretary of the history department. When one of my colleagues resigned, our group happily asked Theo to fill his place.

In the first years after he became a member of our group, we spent most of our time restructuring courses. Gradually, however, we were able to spend more time on research, and an intensive, fruitful and rewarding period of research collaboration began. We first worked together on a family reconstruction in Breda, concerning the period from 1850 to 1940 (Engelen & Hillebrand, 1985). Schuurman (1986) argued with us about the ordering principle (by birth cohorts instead of marriage cohorts). For us, however, the most important conclusion was that a family reconstruction brings you very detailed information on fertility behavior in a relatively small area at the cost of many working hours; one could therefore say that it is an inefficient way to study fertility decline.

I think the work from that period of which we are both proudest was our study of fertility and nuptiality in the Netherlands as a whole between 1850 and 1960 (Engelen & Hillebrand, 1986), not only because our work resulted in a publication in *Population Studies*, but also because this is where we built the foundations for our theory about fertility decline. This theory states that there are factors that stimulate a decline in fertility. One

of the most important factors, together with infant mortality, is a change in the direction of income flows. In traditional societies there is a flow of income from children to parents, because the children contribute to the family income. This leads to high marital fertility. In more modern societies, the flow moves in the other direction, from parents to children. This is because parents have to invest in the education of their children, and so a lower marital fertility seems appropriate. However, social practice, as always, is more complicated. In many regions there seems to be a lag between the economic push to change reproductive behavior and the actual behavioral change. This lag is caused by delayed acceptance of birth control. The change in reproductive behavior tends to lag behind the change in income flow, particularly in more religiously observant regions.

What also became apparent while writing our article for *Population Studies* is the danger of working with data at an aggregate level. Regional averages can mislead researchers, so it is important to verify conclusions at the individual or family level. As mentioned above, a traditional family reconstruction is too time-consuming when you want to understand developments in larger regions, so we were very happy when we discovered that, in the Dutch census of 1960, data were collected on the number of live births per existing first marriage. Data were added on, for instance, year of marriage, age at marriage, the wife's religion, the husband's profession, and household income. By combining this information, one can overcome the problem of working with aggregate data without having to deal with the pitfalls of family reconstruction, and it is therefore a unique source in the study of fertility decline. Together with Frans van Poppel (Engelen, Hillebrand & Van Poppel, 1989) we published the 1960 census data in what nowadays seems an old-fashioned way: in a book. In this way the data became accessible to everyone, including ourselves! In combination with other census data, all the material was available for a thorough study of fertility decline. Theo did this in a marvelous way in his thesis on fertility decline in Dutch Limburg in the period 1850-1960 (Engelen, 1987). I had the honor to be his paranymph on the 10th of September 1987, when he defended his thesis with aplomb.

At the end of 1986 I left the university in Nijmegen for a job at the Agricultural Economics Research Institute (LEI) in the Hague. This could have been the end of our collaboration, and for a short while it was. However, with a grant from the Dutch Foundation for Scientific Research NWO, I was able to return to the university for a year to finish my thesis. This re-

Photo's displaying Theo Engelen at his PhD Defense, with his paranymphs, September 10, 1987

sulted in another co-production, a review of all relevant literature on the decline in fertility in the 19th and 20th centuries, which was published in one of the leading Dutch historical journals (Engelen & Hillebrand, 1991). The review was later extended, and featured as the literature overview in my thesis on the decline of fertility in the Dutch provinces of Utrecht and Groningen in the period 1879-1960. The thesis was titled *Van Motivatie tot Acceptatie* (From Motivation to Acceptance), a title which served as an apt summary of what happened in the period of declining fertility. I defended my thesis on October 31st, 1991 and Theo was my co-supervisor.

In the preface to my thesis I wrote the following: "(…) Theo Engelen, who developed during the past years from a teacher into a (former) colleague, research buddy, co-author and co-supervisor, but above all into a friend. My greatest wish is that in the future we will be able to work together in a big, long lasting project" (Hillebrand, 1991, p. 6). The first part of the sentence is definitely true, but unfortunately the wish for the future never became a reality, which I think is a pity: not so much because of what we might have contributed to scholarship, but because of our rather unique collaboration. We would have decided what we wanted to write, taken half a day discussing the structure of the article or paper, and divided the work. During the work we would have had eloquent discussions about our field of research and at the end we would have combined the work and added the finishing touches.

You may ask: what is so special about that? It is difficult to give an adequate answer, but I will try. First, I think, we were both hard workers, but we also had very different qualities, which we knew was the case, and put to good use. Moreover, when we agreed upon a schedule, we stuck to it, which made us efficient. Furthermore, because we became real buddies, we worked in harmony. But I think the best argument is that, although I have worked successfully with several other partners after 1991, there was always the feeling that I was missing something, or rather someone. And I think the 'someone' was my buddy from the eighties. Theo, thank you!

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[4]

MARLOES SCHOONHEIM

Maya Angelou and memory retention

62 'People will forget what you said, people will forget what you did, but people will never forget how you made them feel', the American poet and civil rights activist Maya Angelou has been quoted as saying (Kelly, 2003, p. 263). It's been a while since I worked closely with Theo Engelen, who supervised my PhD research at Radboud University between 2000 and 2005. To name but a few of our achievements together: we shared cigarettes and beers on the campus in Nijmegen, tried (and failed) to push over the famous Arch of St Louis, climbed the Empire State Building in New York, shopped in the (then) world's tallest building Taipei's 101, and wrote a children's book together. That seems like a lifetime ago though. How much do I actually remember of our working relationship? Let's treat Angelou's quote as a hypothesis and put it to the test.

In spite of Theo's efforts as supervisor, my PhD degree holds precious little significance for me. There's only one person in the world who knows and celebrates the date of the graduation ceremony: my mother. Sadly, her yearly postcard to congratulate me has not contributed to an increased memory retention of when I graduated. I can't even remember in what season I received my PhD – was it during spring? Or summer? I do recall the year, but only because, shortly after graduation, my partner and I moved over 9,000 kilometers – I had Theo to thank for this experience of a lifetime. We can safely conclude that I have a natural indifference to my PhD degree.

My work in the humanitarian aid sector has wrecked what was left of my appreciation of university degrees. Anywhere I work, from Haiti to Myanmar, I meet people who have the brains to obtain a degree and the wit to make a valuable academic contribution. For many reasons however, almost always beyond their control, they lack access to (higher) education.

My PhD degree is part of the winning lottery ticket I received at birth: an advantage granted to me first and foremost because of the time and location in which I was born. The aid workers that are my colleagues largely feel the same. Because of the constant need of innovative approaches to every day, persistent challenges in our work, my colleagues care more for my artistic than my academic achievements. They don't give a hoot about the fact that I left art school before obtaining a degree. Actions speak louder than diplomas. So do five years at Radboud University hold no value for me? Of course they do, but that value is personal rather than social or economic. Theo has contributed significantly to that value – not by signing my degree but by sharing a genuine enthusiasm for the process that preceded it.

I love history. To me, history is storytelling about individual people and the whole of humanity at the same time. In the interaction between individual and context there might be a lesson about culture, society and the way stuff works in general – but for most historians it's also perfectly fine if there are no grand deductions and inferences to be made. Working with Theo, who shared that passion for history, was pure joy. Like me, Theo has a broad interest in history and can get enthusiastic about big lines, nitty-gritty details of the past, and everything in between. He is not shy to use his imagination and, in addition to solid academic investigation, take time to step into the moccasins of historical subjects. If you ask me, that imagination has been the key to Theo's success in academia and beyond. It motivates Theo to transfer his passion for a historical topic to other people: he writes clearly and concisely, telling a story and taking his readers along. No wonder he is also an accomplished children's and adult book writer.

Doing historical research, I discovered, meant accumulating questions, and most of them landed on Theo's desk. As his PhD student he and I talked for hours, trying to distinguish between the question that was to be the focus of my research and other questions that were equally interesting but not the point of the endeavor. Then there were more questions as I identified and evaluated useful sources. Theo was a fantastic supervisor, for four reasons. First of all: he never despaired in those talks (or if he did, he never showed it) and seemed to have absolute faith that I, eventually, would be able to find answers. What I also marvel at is that after doing a vast amount of research himself, Theo still shared my curiosity for the topic I worked on. He didn't have a 'been there, done that' attitude but shared my joy when a source yielded something weird or funny. Thirdly, Theo allowed me to make mistakes. I would take on a question

or source – which in hindsight my supervisor had kindly warned me against – which would lead me nowhere and Theo would be there to listen to my lamentation with patience and humor. I've learned a lot from making those mistakes. Finally, Theo was not shy to, sometimes ruthlessly, keep my head straight. During our conversations I sometimes got distracted by the clouds behind his office window and my mind would drift off. One day he leaned over his desk and actually boxed my ears. I have to admit that it worked: I was able to focus on our discussion again.

There are many passionate historians in this world who have achieved academic success like Theo; but few of them are as generous in sharing that success with others. Theo established a collaboration with two distinguished universities abroad (Stanford University in the US and Academia Sinica in Taiwan) and shared his connections with me, so I could apply for scholarships. I have been incredibly fortunate to have been a visiting scholar at both. The experiences were unforgettable. In Stanford my partner and I lived in the garden house of researchers Hill Gates and Arthur Wolf. On February 11, 2004, Hill came running to our cottage, a radio clutched in her hand: 'They're doing it! They are marrying gay couples!' San Francisco mayor Gavin Newsom had decided to end marriage inequality in his city and issue marriage licenses to same-sex couples like us. Two days later, Marjan and I got married in San Francisco City Hall (although all marriages were eventually annulled by California governor Arnold Schwarzenegger). By the time Marjan and I moved to Taipei, we started living together. We were in love and poor as rats. Theo, who had just finished his period as a visiting scholar of Academia Sinica, arranged an apartment and donated all his furniture to us. Marjan and I stayed in Taipei for three years, learning Mandarin Chinese, eating 'stinky tofu' at Taipei's night markets, and rescuing street dogs and cats that we would eventually bring with us to Europe. In short, Theo started as the supervisor of my historical research and ended up playing a key role in accommodating the spectacular construction of my exciting personal history.

So what can we conclude from testing Maya Angelou's hypothesis? 'People will forget what you said' – Angelou is only partly right in that regard. I can't recollect any of the wise words Theo Engelen must have spoken to me about my PhD research. But I regularly quote Theo's variation of a famous slogan ('we're here, we drink beer, get used to it'). 'People will forget what you did,' Angelou continues. Again Angelou is only partly right, for I can't recall any of the conferences I attended with Theo, but I

vividly remember visiting a gay bar in New York together. 'People will never forget how you made them feel', Angelou concludes. And she's 100% right: I will never forget the sense of experience left by my working relationship and friendship with Theo.

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[5]

YING-CHANG CHUANG

Some shared experiences with Theo Engelen

66 I have known Theo Engelen for over two decades. All of us in Taiwan see him as a true gentleman and scholar. He is gentle, has a wry sense of humor, and is a devoted researcher. It has been an honor to work together with Theo to promote the comparative study of historical demography between Taiwan and the Netherlands. Learning that Theo is approaching retirement from his position at Radboud University, and to show my profound respect and indebtedness, I would like to recall some of our shared experiences.

Beginning in September 1985, our late mutual friend Arthur P. Wolf of Stanford University took up a one-year position as a visiting research fellow at the Institute of Ethnology, Academia Sinica. During his stay, we collaborated in using Japanese colonial-era household records collected from select locales to create a common database under the auspices of the Program for Historical Demography. In collaboration with Academia Sinica's Computer Center, a computer program was written to store the demographic data available in those household records. Systematic analysis was then carried out on a variety of subjects relating to Taiwan's historical demography. After several years of work, by which time the database had reached a certain size, Arthur introduced me to Theo, who had also participated in the research workshop at Stanford University on 'Marriage and the Family in Eurasia: Perspectives on the Hajnal Hypothesis'. By the end of that workshop, we had become steadfast friends. Professor Engelen from then on became Theo.

In December 1997, the Institute of Ethnology, Academia Sinica organized a workshop with the title 'Marriage, Family, and Fertility'. Theo and postdoctoral fellow Francois Hendrickx also attended this workshop, which represented a first effort at collaboration in historical demography

between research groups in Taiwan, the United States, and the Netherlands. An application was made to Taiwan's Chiang Ching-kuo Foundation for International Scholarly Exchange for a two-year collaborative research project involving Theo, Arthur, and myself entitled 'Population and Society in Taiwan and the Netherlands' (July 1998-June 2000). Its purpose was to compare the historical demography of Taiwan with that of the Netherlands. We also agreed to further strengthen scholarly exchanges by planning for a series of workshops in Taipei and Nijmegen on historical demography.

In 2001, Theo organized the first workshop, 'Marriage Patterns in Taiwan and the Netherlands'. That workshop included a collaborative set of extended essays by Dutch, American, and Taiwanese historical demographers on marriage patterns in the Netherlands and Taiwan. Two years later, in 2003, a second workshop was held at the Institute of Ethnology, Academia Sinica, entitled 'Comparative Research on Demography and Marriage over the Nineteenth and Twentieth Centuries'. In addition, Theo organized two panels at the annual meeting of the European Social Science History Conference in 2004. Again, Dutch, American, and Taiwanese historical demographers wrote papers that utilized the database of Taiwanese household records available at the office of the Program for Historical Demography. These workshops and panels exhibited the results of the research projects on transnational historical demography.

Theo was invited to be a visiting professor at Academia Sinica from November 2004 to December 2005, residing at the Guesthouse for Visiting Scholars, Academia Sinica. During this year-long stay, Theo and Dr. Hsieh Ying-hui, postdoctoral fellow in the Program for Historical Demography of Academia Sinica, co-authored an article comparing the historical demography of the two cities of Lukang in Taiwan and Nijmegen in the Netherlands. This article was then published in the third volume of *Life at the Extremes* (2007). During this stay, Theo also had the opportunity to tour through much of Taiwan and experience the everyday lives of the Taiwanese people, which he even used as material for writing children's stories (*Marlow, De drie mannen van Eva*).

Between 1997 and 2007, Theo enthusiastically promoted and participated in collaborative research between Stanford University, Radboud University, and Academia Sinica on transnational historical demography. His research contributions are substantial and diverse, and benefited both myself and the whole research team of the Program for Historical Demography. They are enormous and their value is self-evident. Our research

team's then-assistant Lin Xingchen ChiaChi even received her doctorate in history from Radboud University under the supervision of Theo and, after returning to Taiwan, accepted a position at the Department of History, Tamkang University, from where she has continued to participate in Academia Sinica's Program for Historical Demography. Several of Theo's graduate students and postdocs have also become visiting research fellows at Academia Sinica.

It is particularly worth nothing that, when I was temporarily transferred from Academia Sinica to National Chiao Tung University to establish the College of Hakka Studies, Theo also promoted the establishment of an exchange program between Radboud University and National Chiao Tung University, which has involved numerous students in reciprocal visits and other scholarly exchanges, and which continues to this day. These opportunities for scholarly exchanges and collaboration over more than two decades leave me with many unforgettable fond memories.

[6]

HILL GATES & JOHN SHEPHERD

Theo Engelen: Taiwan, carpentry and scholarship

In the long list of Theo Engelen's accomplishments, we insist on preserving a record of his two most eccentric undertakings: his unexpected plunge into China studies in 1996, and his late-blooming skill in housebuilding. Each of these connects him to the authors of this brief scrap of academic history. We watched Theo extend his abilities in these areas by virtue of our own connections with Arthur P. Wolf: John as long-ago PhD student and Hill as somewhat less long-ago wife, respectively. Without this link, we might have missed out on knowing Theo. He taught us that even in these benighted times, Renaissance men still stand among us.

Today's academic world is so divided by discipline that researchers with broad common interests, but who have been trained in different fields, do not always find each other. Arthur and Hill were quite fortuitously linked to Theo by Leo Douw. In 1995, Leo was kind enough to invite Arthur and Hill to spend some weeks in Amsterdam giving talks and meeting Dutch colleagues. Central among these, of course, was Theo Engelen. His combination of social demography expertise and willingness to take on the challenge of the Chinese world eventuated in the development of a project in comparative demographics using the unique advantages of large-scale and reliable Western European and Taiwan household registers. This undertaking engaged colleagues at Radboud University; Taiwan's Institute of Ethnology, Academia Sinica; Stanford University; and the University of Virginia. Theo's year-long stay at Academia Sinica and subsequent efforts resulted in the impressive expansion of Radboud University's international connections in East Asia, many intercontinental meetings and articles, and four books under the rubric *Life at the Extremes.* This set includes Theo Engelen's book co-authored with Hsieh Yinghui, *Two cities, one life: marriage and fertility in Lugang and Nijmegen,* and three edited

volumes to each of which he contributed mightily. We shall have more to say about these below.

An aspect of Theo's immense life-force that his European colleagues may not fully appreciate, however, is his, and his family's, help in building Arthur Wolf's and Hill Gates' retirement-home-*cum*-scholar's writing retreat: Saltlick House – by hand, and from the ground up. The house grew slowly, but its growth sped up greatly in the many summer visits of a Dutch labor brigade. This was made up of Theo and his children, including daughter Sanne, whose surgical skills made her a whiz with a table saw; sons Thijs, Leon, and Cas; their mother Lily; Theo's brother Big Leon (who actually knew carpentry); and Big Leon's wife. An early major effort by the Engelens built 'the Dutch garage,' in which Hill was finally able to in-
70 stall a refrigerator, and take after-work showers. John was not always present (certainly not at the showers), but enjoyed the new mod cons when he came. Thijs and Leon were repaid for their work to some degree when Arthur taught them to drive his large pickup truck. When the ravages of woodpeckers threatened to destroy as fast as we could build (woodpeckers are *in absolutely no danger of extinction* in Northern California), Arthur taught them and young brother Cas practical, Wild West pest control – with a shotgun. Needless to say, their mother Lily was horrified. Theo took his wages in the fine local craft beers and Dry Creek Valley's slightly more than adequate wines. Photos of those golden summers show him developing as an electrician as well as a carpenter, always with a glass in his hand.

John first learned of Theo from his teacher, the late Arthur P. Wolf, when Arthur shared his excitement at having met a Dutch colleague who was doing family reconstitution from household registers: 'Registers as good as those from Taiwan' – high praise from Arthur. Seeing them got his juices flowing. In January of 1996, with Theo and Arthur cheering in the background, Chuang Ying-Chang of Academia Sinica, Taiwan, organized a conference on Asian Population History, supported by the Academia and the IUSSP Committee on Historical Demography.

Arthur and Ying-Chang had been working for several years to create the Taiwan household register office, where photocopies collected by colleagues from a number of sites around Taiwan were entered into a standardized database. The Taiwan register project has since matured into the Program for Historical Demography of the Research Center for Humanities and Social Sciences, Academia Sinica. Being able to compare results from this project with those produced from the Netherlands registers

excited us all, knowing it would engage issues in the wider field of historical demography. At last, a Chinese case would be systematically analyzed and compared to a European one using the best possible sources of demographic information. With it, we could challenge what to us seemed a doubtful depiction of the Chinese demographic regime developed by James Z. Lee and his colleagues in the Eurasia Population and Family History Project.

In the spring of 1997, John hosted a workshop at the University of Virginia, attended by Theo, Francois Hendrickx, and Arthur. They explored the two kinds of registers and argued over database design. An outing to Thomas Jefferson's Monticello (a must for visitors to Charlottesville) was fueled by the 'real America food' requested by Theo's eldest son Thijs. Thijs was more impressed by American big gulp sodas and outsized hamburgers than by Thomas Jefferson, John recalls.

John soon joined the network that came to be called the Population and Society in Taiwan and the Netherlands Research Group. Over the following years, we mounted a series of conferences and book projects comparing marriage, fertility, and mortality in Taiwan and the Netherlands. Thanks to Theo, John and Hill enjoyed the chance to meet and work with his colleagues at Radboud University, including Jan Kok and Marloes Schoonheim.

Theo, along with Arthur and Ying-Chang, was active in writing proposals and raising money for the series of conferences, and for the resulting publications. His help was essential in winning funding from numerous sources, including the Netherlands Organization for Scientific Research, the Chiang Ching-kuo Foundation for International Scholarly Exchange, the N.W. Posthumus Institute, and the National Science Council of Taiwan. Theo was instrumental too in winning the agreement of Aksant Academic Publishers to bring out a series of volumes based on the work of project participants, to be edited by Ying-Chang, Theo, and Arthur. Theo was also the chief organizer of the conferences held by the group in the Netherlands. In 2001 the first of these, on marriage, was incongruously but delightfully held at the beautiful convent in Boxmeer. The Hajnal hypothesis was given a lively examination in 2003, and new findings in mortality were considered at the Hotel Ehzerwold in 2007. Always a steady force, pushing the project forward, Theo made things happen. Without him, much major research would never have been undertaken, or important disciplinary debates resolved.

During intervening summers, John sometimes joined Theo and his

family at the construction site on Wolf Ranch. We all enjoyed the company of the heavy equipment operator and ranch caretaker Bill, who regaled us with stories of dreadful storms, dry summers, things killed and eaten, things fed and cosseted, fruit and vegetable harvests, things killed to protect those harvests – stories Arthur's father would have told had he still been among us. Theo, a deeply non-violent man who has nonetheless explored violence in his fiction, was not perturbed by tales of slaughter.

Over the years, Arthur and Hill took great pleasure in Theo's warm hospitality in Cuijk. John was equally kindly hosted when visiting Nijmegen in December 2013 to give a paper on the history of smallpox in Taiwan. On such occasions, Theo created a wonderful atmosphere of friendship and collegiality, oiling, when necessary, the sometimes sticky wheels of scholarship with crisp logic and cheerful compromise. The marks he has left are varied, always impressive, and global.

[7]

YING-HUI HSIEH

Not just a historian, demographer, writer but also a magician of life

The year 2005 was an important one in my life. As well as having a baby boy, I began collaborating with an amazing scholar on the book *Two Cities, One Life: Marriage and Fertility in Lugang and Nijmegen*, which was published in 2007. Theo Engelen became the first European scholar whom I knew, and he was full of incredible energy both in his academic and personal life. After we started our work, we met every week to discuss the book during the period in which he was working at Academia Sinica, from late 2004 to 2005. In contrast with the traditional teaching pattern, Theo, a senior scholar, guided me, a junior postdoctoral fellow, in a very gentle way.

I really enjoyed working on two different cultures and societies under Theo's supervision, and I discovered that he is a very good storyteller when he tried to help me understand European culture. For example, I still remember how he described that in the eighteenth and nineteenth centuries, many churches set up foundling wheels to take in abandoned babies. He explained that it was the western solution to the problem of unwanted infants. These kinds of stories raised the issue of how the Taiwanese dealt with – in this case – unwanted children, something that I had never considered until Theo raised it. He always showed his delicate curiosity when we were discussing family life in the Netherlands and Taiwan. It forced me to think about common social phenomena that I took for granted and to search for more information or even examine which mechanisms were behind certain demographic processes and outcomes.

It seems that to Theo, one simple question could be transformed into a vivid story of everyday life: although events in daily life looked much alike, they actually implied a lot of variety and heterogeneity. I always liked to listen to Theo's interpretation of cultural differences and similarities be-

tween Lugang and Nijmegen. He showed himself to be a true expert in finding out the causes behind similarity and variety by asking many interesting 'why' questions. For example, we wondered why infant mortality was so high from July to October in Lugang whereas this was not the case in Nijmegen, or why the age of marriage of women in forced marriages is later than for regular marriages.

Another extraordinary thing that impressed me is that Theo carried out statistical analysis by himself. He is a scholar who is very passionate about searching for reality, whether using quantitative or qualitative methods. Theo is a historian who is very good at interpreting many kinds of historical sources, but he also showed excellent logical thinking when creating precise and easy-to-read statistical tables. Today, it is very rare that a researcher applies different methods to verify hypotheses or to integrate a theoretical model simultaneously. Moreover, most scholars do not do both these things by themselves. I count myself among the very lucky few to even know two experts who do and to be a witness to how they do their research: Arthur Wolf and Theo Engelen.

Next to our scholarly collaboration, *Two Cities, One Life* also reflects the time that I shared with Theo in Taipei. By respecting and enjoying everyday life in Taiwan, Theo maintained a good quality of life in the multicultural city of Taipei, full of international cuisine. For example, one day we passed by Swensen's, a very famous ice cream shop originally from California. Theo was very excited and we went in and had a wonderful time: a Dutchman in Taipei enjoying California's desserts! It even made me wonder if he had been dissatisfied after 'normal' meals, since ice cream

never accompanies meals in Taiwan. Still, Theo always seemed at ease with his current situation and he did his best to try anything new in Taiwan, almost like an anthropologist who is trying to blend into a foreign and exotic community.

That Theo is not only very serious and efficient when you work with him, but also considerate and warm, I noticed even more when in 2006, my husband, our eighteen-month-old son and I traveled to the Netherlands and stayed at Theo's house for a week. We were very touched that Theo cooked rice, 'Mapo Tofu' (spicy tofu) and 'Congyou Bing' (scallion pie) on the last day of our stay. These beautiful memories, and many more, are unforgettable and keep reminding me to be a rigorous scholar and a warm guide for young people. What in my opinion is the most important thing that we all can learn from Theo as a historian, demographer and writer who is living his one marvelous magical life, is a conclusion of our co-authored book: reality is much more complicated than we assume, and we should keep trying to unravel this complexity.

[8]

XINGCHEN CHIACHI LIN

My supervisor and my Dutch father

The first time I met Theo Engelen was in November 2004. He was invited to the Institute of Ethnology, Academia Sinica, as a visiting professor for one year, and I was the research assistant responsible for receiving him. I still remember that he always walked gracefully into our program office and asked courteously about research matters. And the jar of Dutch licorice or 'Drop' that he brought as a present to our office staff made it all unforgettable for us! Thanks to the encouragement and recommendation from Ying-Chang Chuang (Academia Sinica), Theo agreed to accept me as his student and helped me to start my doctoral research in the Netherlands in September 2005. In October of the same year, Theo returned to the Netherlands as his research work in Taipei reached an end. We continued to have contact by email. After a year of correspondence, I finally flew to the Netherlands for my doctoral study on November 1, 2006. Theo personally drove all the way from Nijmegen to Schiphol Airport to pick me up. That was the first time I set foot on the European continent, and my 'fantasy' study life in the 'Giant Country' thus began.

In our first meeting at Radboud University, Theo took out a pen and a piece of paper and told me that from now on he wanted to keep a record of my academic life so that he would be able to give a good speech on my graduation day. He was a great advisor, always attentive and full of scholarly enthusiasm. During the three years of my stay in the Netherlands, Theo would invite me for lunch or to celebrate many festivals with his family, in addition to the regular meetings we had to discuss the writing of my thesis. His extensive academic knowledge and his warm courtesy both demonstrated to me what a great scholar he is. Of course, as my advisor, Theo would also subject my thesis to stringent criticism and urge me to improve my academic writing . Finally, under the guidance of Theo and with the support of the research team of the Program of Historical

Demography, Academia Sinica, in Taiwan, I obtained my PhD degree in history in November 2011 and returned to Taiwan to teach at university under Theo's recommendation.

Entering the field of historical demography has been a journey full of adventures and unknowns. I feel fortunate to have been supervised by a professor who is not just a teacher, but also like a kind of father to me. Therefore I would like to express my most profound gratitude and respect to Theo.

PhD Defense of Xingchen ChiaChi Lin, november 15, 2011

[9]

MARGOT VAN MULKEN

Theo Engelen goes to Washington

78 One of the first things you had to do, as a dean, was to yield the floor to one of the speakers who was about to praise the qualities of a departing professor. You said: "Now, I ask the dean to come forward and address a word of farewell to the professor." Everybody laughed. Everybody saw that you were playing with your new role as Dean and your unease as a formal speaker. Deans are institutions, not human.

It must have been in the Fall of 2014, and we were waiting in the corridor, outside of the conference room where we used to hold our faculty council meetings. We were waiting for the outcome of the deliberations of the Faculty Works Council. You just had given a passionate speech in which you explained that it is better for a subsidiary Works Council to adhere to the responsibilities they were given by law: it was their prerogative to decide whether the organizational changes we were about to put in place for the Center for Parliamentary Research were acceptable – a so-called 'unimportant' change in the organization. You showed that they were better suited in deciding whether the changes were fair and honest than was the university council. You also showed that declining this responsibility meant that the council was dodging their duties, and thereby shirking the very task for which they had been chosen: to assume responsibility. You had already managed to convince the presidium of the Faculty Works Council on the previous day, when we invited them to come and discuss the ideas behind the intended changes. Unfortunately, they did not succeed in convincing the rest of the group. So, when we re-entered the room, we took our seats and awaited the verdict. 'Let's bring it to University level,' the Councils chair said, and you were furious. 'I'm outraged,' you said *sotto voce*, but you remained calm and level-headed. Afterwards, we gathered

in your room and discussed our astonishment. Why didn't they see it our way? Why did they treat us as if we were apparatchiks? Admin robots? "Them"? Why didn't they see that it was us? We, the nice people?

Today, I look back on this discussion as being very meaningful, because it shows our mistake. When you decided to take on administrative tasks, you set a new standard. In fact, to my mind, you were the first dean to show that it is possible to combine a humanistic view with managerial capacities. You managed to remain a normal person and to carry out a public office at the same time. The two ends met! You were both yourself and the dean. To my mind, this was not always self-evident with the former deans. You showed that it could be fun to carry out managerial tasks and downplay the importance of being earnest. Mocking the seriousness of the job and ironizing the academic hierarchy makes this livable and doable. Speaking of oneself and to oneself in the third person allows one to see oneself as a temporary agent, not as a Transformer (meaning of course the children's toy). You set an example, and I hope that deans after you live up to these expectations. But this bi-location of personalities also poses a dilemma, for it has to be perceived by the other party as well. This is not always the case. The Works Council anecdote shows that other parties can simply deny the twofold face of the Dean-persona. They preferred to see the representative of the institution, not the nice guy temporarily occupying the role.

They were ready to buy a car from you as a person, but not from you as a dean. Very strange. This is not what can be learnt from the rules of persuasion, the rhetoric of Aristotle, and the combinations of ethos, pathos and logos. We might be dealing here with a totally new strand of research: persuasion by resilience to institutional hierarchy. I guess it is a worthwhile and promising avenue for future research grants in circuits like Healthy Society or the National Research Agenda. You never know.

Thanks for having me introduced to the fun and relativization of managerial tasks. I wish you a very long and joyful journey during your post-academic career, that, undoubtedly, will also be filled with many academic tasks. You will be asked to carry these out, however, because of who you are as a person and your personal qualities. That is for certain.

[10]

HAN VAN KRIEKEN

Rector Magnificus: soul of the university

80 Theo Engelen was my predecessor as Rector Magnificus of Radboud University. Being Rector is a special experience that is difficult to describe. A rector is very visible in academic procedures and other ceremonial performances. He (sadly, at Radboud University, all rectors so far have been male) wears a chain which is a symbol of connection: between faculties, students, teachers, scientists, and in fact the whole university community. Theo Engelen recognized the importance of this symbolic function and ensured that all faculties are represented in the chain. It also symbolizes the connection of the present with the heritage of the past.

In a way, this ceremonial role is one that is almost disconnected from the person. It is a performance. At the same time, it is still the individual that gives a flavor to this function, a flavor that is redolent of everything that is part of being rector, of the identity of Radboud University and, in this case, of Theo Engelen as a person. Indeed, he lighted upon the important blend of being simultaneously an official and an approachable person, embodying both past and future, young and mature. The last combination, by the way, is also exemplified by the books Theo Engelen has written for the young, and, more recently, also for adults.

The other roles of the Rector Magnificus are less visible. Being responsible for science and education for the whole university is a daunting task. Top researchers and teachers are highly motivated and intelligent people and obedience is rarely a trait in such colleagues. They are of course respectful to the office of Rector, but more importantly a rector needs also to win respect from them as a person. This requires maturity, openness, and curiosity associated with a person who himself has the experience of being an academic. It requires the understanding that different areas of research have different habits in publishing and guidance, in research methods and approaches, in organization and finance.

As a member of the board of the university, the rector has a clear governing role. On the board, he needs to defend academic freedom and to oppose the increasing focus on public relations and bureaucracy. This is not at all easy. The national government, student organizations, and many other stakeholders demand increasingly more transparency and accountability. These appear to be two meritorious words and initially everyone tends to agree with these principles. In practice, however, this results in a heavy load of rules and SMART formulated goals which requires a great deal of paperwork and the type of bureaucracy that does not fit at all with the ideal of a university. That was not a pleasant position for Theo Engelen, who is certainly not a fan of bureaucracy.

All Rectores Magnifici experience the difficulties that the position brings along, and the Dutch 'Rectorencollege', of which the Rectores Magnifici of all Dutch universities are members, is the perfect place for sharing these difficulties. This group of people was very dear to Theo Engelen. At his farewell from this college he brought up the issue of leadership. He discussed the various approaches to leadership and how well or not they fit with governing a community of academics. This important topic was received by his colleagues with interest. Can one be an authoritarian leader who dictates what has to be done, or does one need instead to serve or inspire? Is the leadership role for the rector different from that of the president? Should one approach this issue from a theoretical perspective, or from one based on practice and experience? These are important questions for an organization that wishes its employees to grow and be independent, but that at the same time experiences increasing financial constraints and has to consider its market share and the return it makes on investment and output. These issues were not new to Theo Engelen, who had also encountered them as dean of the faculty. Nevertheless, the scope at the university level was much more sizeable, the stakes higher and the environment more complex. It was therefore not always fun to be in the position of Rector Magnificus.

Ultimately, a Rector Magnificus is widely regarded as the soul of the university, and this is precisely the type of vague but important qualification that is suited to a man of learning. For Theo Engelen this role remains the most precious and important one in academia and his commitment and striving can be recognized in his portrait which at this moment is the last in line in the Senaatsroom of Radboud University. It will not remain the last and this symbolizes the ephemeral role of the rector, as temporary bearer of the soul of the university. Theo Engelen now enters a new phase

in his life and I wish him success in all his plans, as a writer, as a thinker but above all as a person who, I am sure, will continue to grow.

Theo Engelen as Rector Magnificus
(photo by Dick van Aalst)

[3]
BUILDING BRIDGES WITHIN THE HISTORY DEPARTMENT

[1]

GERDA DE KLEIJN

Co-leadership in Roman Antiquity unveiled?

Both in our own time and in days long past, particular people play(ed) an important role as leaders of their family, tribe, kingdom, empire, business, school, religious community, or military unit. Such leadership has often provoked curiosity, not only recently, but in previous centuries too. It is even said that 'the study of leadership rivals in age the emergence of civilization' (Bass, 1995, p. 51). Whether or not this claim is accepted, it is clear that in early myth, legend, literature and history, stories about what great men did, and why and how they did it, occupy center stage (Bass & Bass, 2008). Leadership research, however, goes beyond stories about what leaders do. It is also concerned with the people who are led, the relationship between leaders and followers, and so on. There are so many definitions of leadership that Joanna B. Ciulla (2002, p. 340) wrote: 'All 221 definitions say basically the same thing – leadership is about one person getting other people to do something. Where the definitions differ is in how leaders motivate their followers and who has a say in the goals of the group or organization'. Such a broad definition leaves the door open to examine a multitude of leadership phenomena, which has been done by many scholars (Kort, 2008).

What I am interested in is how historians may profit from the findings of leadership studies in their own research. It is my view that leadership studies, especially those carried out from the 1980s onwards, provide opportunities which go beyond earlier approaches. My claim will be substantiated by some suggestions relating to Roman history. This is not to say that new perspectives can only be applied in that research area; they may also apply to investigations of leadership in other periods.

As leadership studies advance in numerous directions, it is essential to keep one's research aim in mind. Here I will concentrate on the issue of

shared leadership, more specifically on that of co-leadership. The significance of this concept has increased in the 21st century. First, however, 20th century developments in the field of leadership studies will be sketched in very rough outline. Then, some suggestions for historical leadership investigation will be given which relate to the use of modern analytical tools and concepts such as solo and shared leadership. As a case study, I have chosen the emperor L. Septimius Severus and his co-leader C. Fulvius Plautianus, who lived at the turn of the third century AD.

LEADERSHIP STUDIES BY SEVEN-LEAGUE BOOTS

For a long period of time, the study of history predominantly dealt with politics and political leaders, including the military element to these topics. In its slipstream, the study of leadership made use of stories about the great political leaders of the past. Researchers were engaged in a quest to identify a leader's innate characteristics in order to establish which qualities made a successful leader.

The 20th century saw a number of developments in both the field and the content of leadership research. Politics gave way to business as the dominant research area. This is not to say that political leaders disappeared from the agenda; rather, that leadership research at large began to pay more attention to leaders of successful businesses than to political leaders. This change went hand in hand with the considerable increase in importance of the social sciences over the course of the century. Moreover, new opportunities for investigating leadership presented themselves, as leaders in office became objects of study, instead of past performance. By means of questionnaires, colleagues and subordinates could be asked to evaluate certain aspects of leadership behavior in relation to its effectiveness or popularity. The data thus generated were handled statistically. All in all, leadership studies moved over from a qualitative to a quantitative approach, using the methodology of the social sciences, which itself was derived from the natural sciences (Ciulla, 2008).

In the course of the 20th century, leadership theory and research first focused on the 'trait approach', which sought to identify a successful leader's personal qualities and traits, such as physical appearance, intelligence and self-confidence. The underlying question was how a leader should be selected. Subsequently, at the end of the 1940s, the emphasis shifted to the 'style approach', which focused on a leader's behavior. In a

break with previous views, the new theory was that leaders were not born, but that their leadership could be learned by training. From about 1960, the 'contingency approach' emerged. Leadership research had to admit that a chosen leader possessing certain qualities, or a leader who had acquired leaderlike behavior through training, could be effective in some situations, yet still fail in others. Research into this situational leadership, however, declined in popularity because of its inconsistent results. New ground was broken at the end of the 1970s by the 'new leadership approach' (Bryman, 1996).

Pioneering this approach was the historian and political scientist James MacGregor Burns (1978), who distinguished between transforming and transactional leadership. He found that leadership is a relationship (Burns, 1978). The relationship between transactional leaders and their followers is a bargaining act, a matter of mutual profit based on reciprocity. In other words, followers expect to be rewarded adequately for the support they provide in order to attain a goal set by the leader. After this, leader and followers go their separate ways. Transforming leadership, on the other hand, 'occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality' (Burns, 1978, p. 19-20). In pursuit of 'higher' goals, leaders and followers together try to achieve change which is in line with their collective interests. Bass and Bass (2008) redesignated this type of leadership as transformational leadership.[1] Transformational leadership became the new paradigm in leadership studies, and was raised to the standard of leadership in practice.[2] It is still a live topic, in spite of the fact that, from the beginning of the new millennium, leadership studies diverged in many directions (Dinh et al., 2014).

The concept of shared leadership is one of these directions (Pearce & Conger, 2003; Pearce et al., 2010; Pearce & Wassenaar, 2015; Small & Rentsch, 2010; Wang, Waldman & Zhang, 2014). It is opposed to the dominant 'framework in which leadership resides with a single person' (Small & Rentsch, 2010, p. 203), and runs counter to the idea that leadership is always a top-down phenomenon, a vertical relationship. Shared leadership research makes the assumption that it is next to impossible for an individual to gain a comprehensive view of a complex organization. In consequence, approaches such as working in teams, distribution of leadership, and collective or collaborative leadership come to the fore. Shared leadership or team leadership is defined as 'a group process, dynamic and interactive, as a shared social process. Its objective is that team members lead

one another to achieve goals of the group and/or organization' (Pearce & Conger, 2010, p. 203).[3] Diversity and capacities of team members which complement each other are vital for its effectiveness. Top-down solo leadership is sometimes branded 'traditional' leadership, directive and transactional, as opposed to 'new genre' shared leadership which is empowering and transformational. Shared leadership appears to be especially effective in complex situations, and relevant for virtual teams, the members of which, because of the great distances between them, cannot be controlled on a moment-by-moment basis (Pearce & Wassenaar, 2015). This is not to imply that vertical leadership is completely obsolete, but rather that the formal leader of a team shares his / her leadership. When the goals are clear, the tasks (including their required leadership roles) well defined, the talents and capacities of the team members known, and the team members trust in each other, leadership tasks may be successfully distributed (Kauffeld, Sauer & Handke, 2017).

The last concept we will consider here is that of co-leadership, which was dealt with by Heenan & Bennis (1999) in an in-depth monograph. Their point of departure was that every successful organization has at its heart a cadre of co-leaders, key players who do the work even if the glory goes to the person at the top. The accompanying notion was that leadership research should not only focus on solo leadership, but should be oriented towards team leadership and co-leadership as well. This new approach has chiefly been pursued by means of investigations into shared leadership in teams (O' Toole, Galbraith & Lawler, 2002). It is quite possible that this development has to do with the usual procedure in the social sciences, that is quantitative analysis of questionnaires completed by a large number of people. My impression is that there are ample numbers of participants for a quantitative analysis of relations in teams at various levels of organizations. Co-leadership by a few people, however, occurs less often and is less amenable to this kind of investigation. As far as I am aware, the phenomenon of two or three leaders at the top of an organization has not been given much attention, apart from the case of a leader exercising power over major subordinates (Raven, 1990). Nevertheless, Heenan & Bennis' (1999) study of co-leaders may be useful when investigating great partnerships. Their lists of criteria for successful co-leadership at the apex of an organization, applying to the person at the top and his or her second-in-command separately, might open up possibilities for historical inquiry (Heenan & Bennis, 1999).

The next questions are: (a) which topics may profit from the insights

taken from leadership studies; and (b) how this is to be done. As Roman history is my area of expertise, my focus will be on that field (De Kleijn, 2009; 2013). Though equally interesting, new perspectives on leadership in other periods of time will not be considered in this chapter. The issue of whether modern leadership studies can help understand leadership in either the Roman Republic or the Roman Empire will be considered below. Though modern leadership studies often use quantitative methods, it is self-evident that any analysis of Roman leadership will be qualitative. A distinction will be made between solo leadership, shared leadership, and (a sub-category of shared leadership) co-leadership.

SOLO LEADERSHIP

It goes without saying that the lives and achievements of great men in antiquity have been described and discussed, by contemporary and later authors up to our own time. Alexander, Caesar, Augustus, and Constantine, to name a few of the most obvious, feature in countless books and articles. Predominantly, their background, their behavior, their rise to power, what they did and why, is treated in terms of solo leadership, or discussed in terms of their representation as sole rulers. Usually, the underlying assumption is that lust for personal power is the dominant motive for anyone at or near the top. This view is in alignment with leadership research, which is focused on hierarchical relations between leaders and followers, rulers and subjects. However, the study of leadership in antiquity might profit from using the insights of modern leadership researchers as additional analytical tools. Scholars might, for instance, distinguish between traits and behavior, allow for the requirements of the situations in which leadership is exercised, or bear in mind the difference between transformational and transactional leadership (De Kleijn, forthcoming). Such suggestions apply to investigations into the underlying views that classical authors held regarding leaders, as well as for the assessment of personal leadership of individuals such as Tiberius Gracchus, his brother Gaius, one of the emperors, or numerous other people from republican and imperial Rome.

Does the notion of shared leadership, in teams or in the form of co-leadership, offer new possibilities? The first question to be asked is what number of participants defines a team or co-leadership. Since the literature on leadership research is vague on this point, there is no fixed quantity for demarcation. In order to keep this discussion within reasonable bounds, we will begin with the assumption that co-leadership covers no more than two or three people. When there are more, they will be called a team. Next, it has to be established whether any form of shared leadership existed within Roman society. Let us start with team leadership. Is it conceivable that (part of) the senate of Republican Rome performed as a leadership team at a given period in time? Or a group of people in office, like the ten tribunes of the people?

With regard to the Empire, there have been investigations into groups of imperial *amici* and *comites*, within the framework of vertical leadership (Nichols, 1978; Crook, 1975). These studies stressed that the emperor needed helpers to govern the empire. Whereas the emperor was seen as the person who made the decisions and took the credit, his helpers, although people with great responsibilities and power, had to be satisfied with limited public esteem (Crook, 1975). Even so, is it conceivable that people worked together as a team for a (limited) period of time, and is this possibility worth investigating? And how should we evaluate the Tetrarchy at the end of the third and the beginning of the fourth century, which is sometimes presented as an example of shared leadership in modern leadership studies (O' Toole, Galbraith & Lawler, 2002)?

As regards the concept of co-leadership, it might be interesting to investigate how pairs of consuls in the republican period operated during their year of office. They had to act in close cooperation with the senate. Were they mere rivals with separate military commands at certain periods of time, or did they work together in civil affairs when they were both present in Rome?[4] Did the triumvirs of the first century BC operate as co-leaders, if only initially? There are several pairings active in the imperial period to examine, e.g. the emperor and the man closest to him. The most obvious pairing in this category is that of an emperor (title: *Augustus*) and his appointed co-emperor (title also *Augustus*) or designated successor (title: *Caesar*), often his son or his brother (natural or by adoption) such as Marcus Aurelius-Lucius Verus, Marcus Aurelius-Commodus, Septimius Severus-Caracalla-Geta, Constantius II-Constans-Constantine II,

to name but a few. Pairings consisting of men who were not close relatives at the start of their period of cooperation, like Augustus and Agrippa, Tiberius and Sejanus, Vespasian and Mucianus, and Septimius Severus and Plautianus, constitute another sub-category.

Some couples seem to have been successful for a long period of time. Others collapsed some years after the beginning of their joint actions. Maybe the determining factor explaining the failure of these partnerships was more than simple lust for power. It might be worthwhile to make use of insights from modern leadership research to pursue the issue of success or failure in greater depth. As a case study, I will look at some aspects of the relationship between the emperor Septimius Severus and the man closest to him, C. Fulvius Plautianus, on the basis of some criteria derived from Heenan & Bennis' (1999) study of co-leadership.

CRITERIA FOR SUCCESSFUL CO-LEADERSHIP

Heenan & Bennis (1999) have formulated a set of criteria to consider, separately, for the no. 1 leader and for the potential co-leader, the no. 2, before turning to co-leadership. Some of these are identical for each position, while others are not. The requirements will be set out here in a somewhat rearranged format, to group together the issues pertaining to both positions for each topic. First and foremost is the issue of ego. For a successful co-leadership, the no. 1 should be able and willing to sometimes share the most prominent place, and to accept and even stress that his no. 2 has qualifications he himself is lacking. The no. 2, on the other hand, needs a fireproof ego. He has to be able to endure public indifference and the disdain of others, and often has to be content with second place or even invisibility. He is advised to define success in his own terms. A second point is that no. 1 should be truly willing to hand over part of his responsibilities to no. 2. If no. 2 is not given the opportunity to take responsibility for the task assigned to him, he cannot develop his own leadership qualities. Thirdly, no. 1 has to ask himself whether no. 2 has the potential to succeed him when the situation requires this, and no. 2 has to know whether, and under what circumstances, he qualifies for the no. 1 position. Fourthly, there is the issue of criticism. Co-leadership functions best in situations where no. 2 has the courage to disagree with no. 1, to criticize what he plans to do or what he has done, and to tell him the 'truth', while no. 1 is able to take criticism and turns it into account. Loyalty is the fifth aspect

at stake. It should be clear from the beginning how much loyalty is demanded from no. 2, so that he knows when to meet expectations and when to walk away. Taking all aspects together, it is essential for successful co-leadership that there is chemistry between leader and co-leader, that they do not begrudge each other the credit for their actions, and most importantly, that they have mutual trust and respect.

Some advice and caveats should also be mentioned. Whereas no. 1 often has the opportunity to bend the situation to his will, no. 2 has to lead as well as to follow. He has to realize that this may be a balancing act. He has to perform as an effective leader, and at the same time follow no. 1. Since, in cases of serious conflict between them, no. 2 will usually come off worst, he has to know better than to take that risk. Finally, there should be awareness when entering a co-leadership relation that, even when no. 1 is firmly in charge, a co-leader's success depends on the extent to which he is accepted by the other parties concerned.

CASE STUDY: EMPEROR L. SEPTIMIUS SEVERUS AND C. FULVIUS PLAUTIANUS

The first centuries of the Roman Empire saw at least four pairings of men at the top of society that may be characterized as co-leaders, in which the pair did not have a close familial connection at the start of their collaboration. Two of those co-leaderships performed well, whereas two ended in great turmoil and the violent death of the co-leader. The two which performed well were Augustus-Agrippa and Vespasian-Mucianus (De Kleijn, 2009; 2013),[5] and the two which collapsed were Tiberius-Sejanus (Champlin, 2012), and the pairing that will be elaborated upon in this contribution: Septimius Severus-Plautianus.

The following may serve as a thumbnail sketch of their relationship.[6] Septimius Severus (born in Lepcis Magna, AD 146) was proclaimed emperor on April 9th 193 by his troops in Carnuntum, in the province of Pannonia Superior, about two weeks after the murder of his predecessor Pertinax in Rome (Birley, 1988; Spielvogel, 2006). He entered Rome on June 9th, after Didius Iulianus, whom the senate had proclaimed emperor in Rome on the very day of Pertinax's murder, had been deposed and killed. Subsequently, it took Severus four years to defeat two other rivals who were also acclaimed emperor by their troops, Pescennius Niger (emperor April 193-April 194) and Clodius Albinus (emperor between the end

of 195 and February 197), in Syria and Britannia respectively. During and after these civil wars, up until early 198, he also fought against the Parthians in the East. In 208 Severus went to Britannia to conquer Caledonia. He died in Eburacum (York) in 211. Apart from his military campaigns, he traveled to Syria, Egypt and North Africa, which meant that he was absent from Rome for long periods of time. From his second marriage, to Julia Domna (born ca. 170, in Emesa, Syria), Severus had two sons, Caracalla (born 188, in Lugdunum) and Geta (born 189, in Mediolanum).

There is no factual information on Plautianus' youth and early career.[7] Supposedly, he was related to Septimius Severus via the emperor's mother, and born like him in Lepcis Magna in Libya. Though Plautianus came from a more humble background than Septimius Severus, they may have spent part of their youth together in their home town. Plautianus' career before 193 eludes us. He held the office of *praefectus vigilum* in Rome in 195, or maybe 193 (Christol, 2007). Thereafter, in 197, Septimius Severus appointed him *praefectus praetorio*, an office he held until his death in 205.[8] *Praefectus praetorio* was the apex of an equestrian career. The essential role of the *praefecti praetorio* was to protect the emperor and to command the praetorian guard. As commander of the imperial bodyguard, a *praefectus praetorio* accompanied the emperor, both on military campaigns and on visits to any part of the empire. It follows naturally from this that the *praefectus praetorio* was a member of the imperial council, the *consilium principis*.

Usually there were two *praefecti praetorio* simultaneously. For Plautianus' period of office, although he probably had a colleague up to 200, there is only positive evidence for one of them, in 199/200, which means that he may have been, contrary to usual practice, sole *praefectus praetorio* for the greater part of his term (Mennen, 2011).[9] In 197 Plautianus, still an *eques*, was granted the *ornamenta consularia*, the symbols and titles of consulship, which did not imply admission into the senate (Salway, 2006). In April 202, Plautianus' daughter Plautilla married Septimius Severus' elder son Caracalla. The following year, Plautianus was appointed consul, alongside the emperor's brother P. Septimius Geta. Now he had become a full member of the senate, and, as a further honor, was even enrolled amongst the patricians.[10] He had also become extremely rich. On January 25th 205, Plautianus was murdered at the palace in Rome. His portraits were erased and his name chiseled away from many dedications.

Plautianus' extraordinary career from rather lowly origins to father-in-law of an *Augustus* is usually accounted for by his supposed immense lust

for power. The very brief overview above shows that his rise and fall is inextricably bound up with Septimius Severus' rule. This is clear, among other things, from the surviving works of three ancient historians from antiquity who covered this reign. The most fundamental to understanding this period is Cassius Dio, a senator from Nicaea, consul under Septimius Severus and consul for the second time in 229, who was an eyewitness to several of the incidents he described.[11] It may be that the other two historians of the reign, Herodian and the author of the *Historia Augusta*, made use of Dio's *Roman History,* though they did not use it exclusively as their different accounts of the plot that led to Plautianus' downfall show. What was the opinion of these three of the role of Plautianus alongside Septimius Severus? First of all, they had nothing good to say about it. Nevertheless, they saw him as someone who shared the emperor's power. Dio begins his account of Plautianus' vices with the remark that 'Plautianus, who not only shared Severus' power but also had the authority of prefect, and possessed the widest and greatest influence of all men, put to death many prominent men among his peers'. Furthermore, he tells us that Plautianus' power equaled that of the emperors, and that someone called him the fourth Caesar. [12] Herodian, too, says that Severus gave him a share in the empire.[13] Both authors blame Severus. Dio is very clear: 'The one chiefly responsible for this situation was Severus himself, who yielded to Plautianus in all matters to such a degree that the latter occupied the position of emperor and he himself that of prefect.'[14] It seems safe to draw the conclusion that, in Dio's perception at least, Plautianus was Severus' co-leader in the empire, especially from 200 until his death in 205. Given the way in which he had grown extremely rich with imperial consent, i.e. by the appropriation of the confiscated property of condemned people, this perception will have been rife in senatorial circles.

Let us take a closer look at this perceived co-leadership in the light of a few modern insights into co-leadership, as mentioned above. Was Severus willing to hand over part of his responsibilities to Plautianus? Did he judge Plautianus as his potential successor? And what to think, finally, of their respective egos? Other questions, which there is only space to deal with in passing, are: could they speak their minds, take criticism, and act accordingly? Was Plautianus capable of simultaneously leading his subordinates and following the emperor? Did they together assess the extent to which Plautianus was acceptable to the relevant state bodies?

We are aware of a number of Plautianus' responsibilities. The first of these concerns the containment of the risk arising from rival claimants to the emperorship. The moment that Septimius Severus, governor of Pannonia Superior, having accepted the acclamation of his troops, set off for Rome, he must have appreciated that there were rivals to be defeated: Didius Julianus, whom the senate in Rome had made Augustus on the day of Pertinax's murder, and two colleagues in office: Clodius Albinus, governor of the province of Britannia, and Pescennius Niger, governor of the province of Syria. Just like Severus, these were men who controlled substantial military forces. Julianus was killed before Severus entered Rome, Niger was defeated first, and Albinus was appeased for some time. Plautianus was given the task of apprehending Niger's adult sons.[15] He must have succeeded, as they were killed in captivity a few years later.[16]

Another important responsibility entrusted to Plautianus was the office of *praefectus praetorio*. In this role, he had to exercise leadership over the Praetorian Guard, an elite military unit that protected the reigning emperor, but – as had been the case in the past – might also be a threat. He appears to have performed well, since there are no indications at all that his praetorians were dissatisfied with him. On the contrary, Herodian says that his soldiers were devoted to him.[17] Dio tells a story which gives the same impression. Once, when Plautianus was ill in Tyana, Severus went to visit him. Plautianus' soldiers did not permit the emperor's escort to enter with him.[18] This story may well have been told as part of Dio's account of Plautianus' despicable mastery over Severus, just like the story that, on another occasion, Severus explicitly left to Plautianus the ordering of the cases to be pleaded before him.[19] In Dio's narrative, Severus is blamed for leaving matters to his *praefectus praetorio*.

Dio mentions one more of Plautianus' responsibilities, namely the education of Severus' sons Caracalla and Geta. They seem to have been a pair of brats, hard to keep under control, even for their father. It may be that Severus' decision to seek Plautianus' daughter's hand on behalf of Caracalla was intended to burden Plautianus with the task of controlling both young men.[20] The marriage of Caracalla, at the age of fourteen, and Plautilla, whose age is unknown, had been decided upon by their respective fathers, against Caracalla's wishes. The latter not only detested the wife forced on him, but most of all hated his father-in-law, since Plautianus meddled in everything Caracalla did and reprimanded him when he

thought it necessary.[21] After Plautianus' death, Caracalla and his younger brother Geta ran riot. They were overjoyed to be rid of the pedagogue who had kept them under his thumb.[22] Severus moved his family from Rome to the imperial property on the Campanian coast, in order to withdraw his sons from the urban temptations they were unable to resist.[23] In the long run this move did not have the desired effect.

To sum up: Severus left to Plautianus the assignment of apprehending the children of a rival, who might become a threat to his reign; he was in agreement with Plautianus' performance as sole *praefectus praetorio*; and he assigned the upbringing of his sons to Plautianus' care, at least partially.

SUCCESSION

There is no doubt that Severus and Plautianus maintained a close relationship for years. Their friendship and cooperation is attested by literary sources, epigraphically, and probably by reliefs in Rome and Lepcis Magna as well.[24] This does not necessarily mean that Severus viewed Plautianus as a potential successor, although Dio suggests on two occasions that Plautianus was encouraged to think that he really did.[25] But the question of the succession did occupy Severus' mind. According to the Historia Augusta, he gave his son Caracalla the title of Caesar, in order to make absolutely clear to his brother P. Septimius Geta, who had supported him from the start, that he would never succeed him.[26] This must have taken place in 195 or 196. After some time Caracalla was made Augustus, probably in the autumn of 197, and at the same time Severus' younger son Geta was made Caesar. So in late 197, with one son as his co-Augustus and the other as Caesar, Severus made clear his preferred succession. Even so, as the boys were only nine and eight years old at the time of their ascension, they were too young to act as emperors themselves if he were to die in the near future. This is where Plautianus enters the scene. The protection of the emperor(s) had been his first and most important duty since January 197, the moment he assumed the office of prefect of the Praetorian guard. In my view it is very likely that Severus and Plautianus together had devised the following arrangement: if Severus' life came to an end, violently or otherwise, Plautianus would take care of the emperors-to-be.

The plan turned out differently. Over the next five years, Severus stayed alive and Caracalla grew unmanageable to such an extent that a new arrangement had to be made. Again, Severus and Plautianus together thought up a solution: marriage would make Caracalla calm down, and if

he married Plautilla, his father-in-law could stay close by to supervise him. This was the solution that was implemented. The marriage took place in 202; Plautilla was included in the imperial family and made Augusta. Plautianus was rewarded with a (second) consulship in 203, and was seen by some as a fourth emperor alongside Severus and his sons. Unfortunately, this arrangement did not work either. Caracalla did not calm down; on the contrary, he could bear neither his wife nor the supervision of his father-in-law, and rebelled against the situation in which he found himself. Plautianus must have become aware that Caracalla's character and behavior would not improve. He established that his son-in-law was utterly unsuitable for the emperorship.[27]

This conclusion would have far-reaching consequences. We do not know if Plautianus shared this conclusion with Septimius Severus; maybe he did. Individually or together they had run out of options for a smooth transfer of imperial power from Severus to his elder son. Plautianus now reached a critical point. He wondered whether he stood a chance of the emperorship himself. Herodian listed his qualifications: his immense wealth, the personal devotion of his soldiers, the honors given to him by imperial subjects, his status as senator and two-time consul, and the image he presented in public appearances.[28] Whether or not he made an attempt at taking power depends on which of the accounts of his downfall in January 205 is followed, that of Herodian or that of Cassius Dio. They both describe the plot that ended with Plautianus' murder, but their opinions on who caused it are quite different.[29] Herodian continues his account of Plautianus' plans by relating his foiled attempt on the lives of Severus and his sons,[30] whereas Dio put the blame on Caracalla, who devised a plan to get rid of his father-in-law.[31] Modern authors usually judge Dio's report more plausible than Herodian's (Birley, 1988; Daguet-Gagey, 2006; Moscovich, 2004; Spielvogel, 2006;).

In conclusion: at first, Plautianus seems not to have aimed at the first place in the empire. That Severus entrusted him with the guidance of his sons in the unlucky event of his early demise must have meant that both he and Plautianus himself were of the opinion that Plautianus qualified for the emperorship. Together they provided for the imperial succession.

EGO

As in the case of the topics of responsibilities and the succession, the issue of ego will be approached from two perspectives, that of Severus and that

of Plautianus. No one will blame an emperor for holding the prominent place. A second in command, however, is easily accused of overstepping his position. Nevertheless, successful co-leadership requires that the emperor be willing to sometimes share the limelight.

Severus seems to have been willing and able to do so. Images and statues of the emperors were set up all over the empire. Apparently, images and statues of Plautianus were erected as well. Dio states that Plautianus' statues and images were even larger and more numerous than those of the emperors, not only in far-off towns, but also in Rome itself. Furthermore, they were erected not merely by individuals and communities, but by the senate as well. Soldiers and senators took oaths by his Fortune, and prayed for his safety. In addition, Dio mentions that Plautianus lodged in better places and enjoyed better food than the emperor.[32] The celebrations on the occasions of Severus' *decennalia* and the wedding of Plautilla and Caracalla coincided in Rome, in the period from 9-15 April 202. Severus treated the inhabitants of Rome to a grain-dole, and the soldiers of the Praetorian guard to a considerable amount of money. There were all kinds of spectacles, to one of which Plautianus contributed alongside the emperor. Plautianus made a great show of Plautilla's huge dowry and the banquet at the wedding.

It seems safe to conclude that Severus granted Plautianus the pleasure of the limelight, at least up to and including April 202. The ancient historians found this hard to accept, and criticized Severus for his complaisance.

As for Plautianus, could he keep his ego under control? Given the obvious hostility of Dio and Herodian, this is hard to establish. The ancient authors abound in descriptions of Plautianus' vices. He was accused of greed, cruelty, violence, licentiousness, and spying on Julia Domna, all of which amounts to misuse of power by an upstart who did not know his place. Maybe he was able to keep his ego in check until his daughter's marriage into the imperial house, but pushed his luck too far after April 202. This seems to have happened subsequently, as Severus began to be concerned, not only by the number of Plautianus' statues, but especially by their being placed amidst those of the imperial family. Severus ordered some of the statues to be melted down, but did not remove Plautianus from power.[33] Nevertheless, he had made it clear that he drew a clear distinction between his ego and that of Plautianus.

CONCLUSION

The case study of Septimius Severus and Plautianus has shown that the use of criteria for successful co-leadership as formulated in modern leadership studies is worthwhile. Severus entrusted Plautianus with several major responsibilities. He made room for Plautianus' responsibilities: a rival's children, the position of sole *praefectus praetorio*, and the education of the emperors-to-be.

He left to Plautianus the assignment of capturing the children of a rival who might have grown up to become a threat to his reign, he was in agreement with the way in which Plautianus performed as sole *praefectus praetorio*, and he placed the upbringing of his sons under Plautianus' care, at least partially. What happened with regard to the succession to Severus does not show that Plautianus aimed at the emperorship, at least initially. Severus entrusted him with the guidance of his sons in the unlucky event of his early death, which means that he must have seen Plautianus as qualified for the emperorship. Plautianus himself would have agreed with that judgment.

When taking a closer look at the responsibilities that Severus handed over to Plautianus, the arrangements they made to secure a smooth succession, and the way in which they handled their egos, it is not immediately apparent that their co-leadership would irrevocably end in failure. Maybe the seeds of later troubles were already present in 202. It would be worthwhile to explore their relationship using the other criteria of successful co-leadership mentioned above, in order to weigh up which were the deciding factors.

The wide scope of leadership studies as developed since the last decades of the 20th century makes it possible to delve deeper into leadership issues in Roman antiquity. Though they are not investigated here, this may hold true for solo and shared leadership in teams as well.

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ZPE: *Zeitschrift für Papyrologie und Epigraphik*.

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1. Burns (2003) himself stuck to the original term, as is shown by the title of one of his later books.
2. For a dissenting opinion, a warning against the idea that 'powerful, visionary leadership is healthy helpful and wise", see Tourish (2013, p. 7).
3. For an overview of definitions of shared leadership see Sunagichi (2015, p. 200); Pierce & Wassenaar (2015) and Kauffeld, Sauer & Handke (2017, p. 235).
4. Pina Polo (2011) discusses the specific functions of the republican consuls, before and after Sulla's dictatorship. In his view, the main transformation in their work was the amount of time they spent on military and civil functions, the first outside Rome, the latter in the city.
5. Biographies in which the other appears have been written of both Augustus and Agrippa separately. Their relationship is explicitly discussed in Powell (2015). At p. 206 Powell compares their relationship to that of a CEO and a COO in a large multinational corporation, developing this idea on the pages to follow.
6. For dates of birth and death etc. used here see Kienast (1996). An overview of Septimius Severus' career, campaigns and honors can be found at p. 156-158.
7. PIR² F 554.
8. Mennen (2011, p. 159-187) discusses the (changing) role of the *praefecti praetorio*, inclusive of context and consequences. Plautianus is mentioned several times. For a history of the praetorian guard see Bingham (2013).
9. The only certain colleague was Q. Aemilius Saturninus (PIR² A 403).
10. Cassius Dio 46.46.3-4; CIL 11, 8050 = ILS 9003, and probably AE 2005, 373 = ZPE 178 (2011, p. 261).
11. PIR ² C 492. Dio's *Roman History* regarding the period under discussion here has survived as later excerpts.
12. Cassius Dio 76(75).14.1 and 6; Cassius Dio 76(75).15.2[a].
13. Herodianus 3.10.6.
14. Cassius Dio 76(75).15.1.
15. Historia Augusta, *Septimius Severus* 6.10; Historia Augusta, *Pescennius Niger* 5.2.
16. Historia Augusta, *Septimius Severus* 8.11; 9.2; 10.2.
17. Herodianus 3.2.2 and 3.2.4.
18. Cassius Dio 76(75).15.4.
19. Cassius Dio 76(75).15.5.
20. Herodianus 3.10.5-6.
21. Cassius Dio 77(76).3.1; Herodianus 3.10.8.
22. Cassius Dio 77(76).7.1-2.
23. Herodianus 3.13.1-2.
24. Arch of Septimius Severus at Lepcis Magna, Arch of the Argentarii, Forum Boarium at Rome.
25. Cassius Dio 76(75).15.2; 77(76).4.5.
26. Historia Augusta, *Septimius Severus* 10.3.
27. Herodianus 3.11.1.
28. Herodianus 3.11.2.
29. For a comparison of both stories see Daguet-Gagey (2006, p. 73). She points out that according to the *Historia Augusta* Severus took the initiative. The *Historia Augusta*, Severus 14.7 used just a few words to describe Plautianus' fall: 'in the course of time he killed him'.
30. Herodianus 3.11.4-3.12.12.
31. Cassius Dio 77(76).3.1-4.5.
32. Cassius Dio 76(75).14.7 and 76(75).15.3-5.
33. Historia Augusta, *Septimius Severus* 14.5-9; Herodianus 3.11.3; Cassius Dio 76(75).16.2-4.

[2]

PETER RAEDTS

The end of the imperial Church in the West (751-1049)*

There can be no doubt that from the middle of the fourth century the bishops of Rome began to claim a special authority in the Christian church. Pope Damasus (366-384) saw himself as the privileged mediator between the faithful and the two greatest of the apostles, Peter and Paul, whose tombs were believed to be in Rome (Curran, 2000). When in 416 Pope Innocent I (401-417) received a letter from the African bishops asking for his support in the struggle against Pelagius, he praised the Africans in his reply for submitting their decisions to the approval of the successor of Saint Peter, the rock, and the font from which all Christian churches must draw the truth. He was immediately given a sharp dressing down by St. Augustine, who reminded the pontiff that not Peter but only Christ himself was the rock on which the church was built and that the keys to the kingdom were given to the whole church and not just to the successor of St Peter (Markus, 1970; Schatz, 1990). These sobering thoughts from the greatest Christian theologian who ever lived did not prevent pope Leo I (441-461) from staking out the claim, preposterous in the eyes of most Christians in East and West, that he was the living Peter and that, therefore, he alone could supply final and binding answers to all questions regarding the interpretation of the Bible and about the correct tradition (Morrison, 1969; Wessel, 2008).

During Leo's pontificate, it also became increasingly clear that the days of Rome's rule in the West were drawing to an end. Gaul was being occupied by the Goths and the Franks, and North Africa, the richest province in the West, was overrun by the Vandals. Most modern historians of the papacy look upon the coinciding of Leo's claims and the Roman Empire's demise in the West as a happy, almost providential event. In their eyes, the barbarian takeover of Western Europe released the bishops of Rome

from their dependency on the emperor and the imperial church, setting them free to develop the spiritual leadership that was rightfully theirs and not the emperor's. It was now time to put an end to what Eamon Duffy (1997, p. 57) called 'the Byzantine captivity of the papacy'. It took some centuries for the popes to be victorious, but it was in the middle of the fifth century that their triumphant march to the supreme leadership of the whole of Western Christendom began. In fact, the unbroken continuity that papal historians postulated never existed, for two reasons.

First, the new masters of the West saw themselves, just as the emperor had done, as the supreme head of the churches in their kingdom. When the Frankish king Clovis converted to Catholic Christianity he was hailed as the new Constantine and, indeed, he began to behave as such. He established a new capital in Paris, where he built a basilica dedicated to the Holy Apostles, just as Constantine had done. He even had his own Nicaea moment, when in 511 he called the bishops of Gaul to a council in the city of Orléans, over which he presided himself. Clearly he conceived of his role in the Church in the same way as the first Christian emperor (Fletcher, 1998). Clovis never had any contact with the Pope, nor did his successors.

The second reason has to do with the self-understanding of the Popes themselves. Did they really experience their relationship to the emperor in Constantinople as 'captivity'? And were they, therefore, trying to establish their independence from the emperor from the middle of the fifth century onward? Gregory I (590-604) is usually seen as the pope who severed the ties with the emperor and the imperial church and turned to the West instead. His initiative, in 596, to send a mission to the king of Kent is usually interpreted as the first move in the new strategy of the popes for establishing their leadership claims in the churches of the West. But about fifteen years ago Robert Markus (1997) made it abundantly clear that Gregory had no such strategy. In his many letters to Constantinople he always addresses the emperor as 'christianissimus Dominus', and he reassures the emperor over and over again that he is his most loyal servant, who is always willing to obey his master even if he does not agree with his decisions. In his very few letters to Western princes it becomes obvious that he considers them to be imperial governors, who temporarily administer the Western parts of the Empire until such time as the proper imperial administration is restored.

Even the initiative to send missionaries to England should be seen in this perspective: Britain was the only province in the Empire lost to Christianity, or at least that is what Gregory thought. It had to be restored to

the faith and to the imperial Church. Gregory's mental horizon was the Mediterranean, the centre of his world was in Constantinople. What happened in the West hardly interested him (Markus, 1997). And the same is true for all his successors in the next century and a half, as is obvious from the fact that from 604 to 752 most popes were Greeks or Syrians, some of whom spoke hardly any Latin (Southern, 1970).

In one respect, however, Rome was very different from all the other episcopal seats in the Empire, even from the patriarchal seat of Constantinople. In her brilliant book *Europe after Rome* Julia Smith (2005) has pointed out that throughout Western Europe everyone was deeply aware of the fact that far away in Italy there was a unique city which symbolized a world which was lost yet might someday be revived: the city of Rome, 'the mother of martyrs, the domicile of the apostles, the capital of the world, the mother of all churches'. Smith (2005, p. 256): 'Rome was Europe's 'imagined community', a powerful idea but a shabby urban experience'. From all countries of the West, pilgrims flocked to Rome to say their prayers on the tombs of the apostles and the martyrs, to attend the papal liturgy in the magnificent basilicas, and to gape at the ruins of the glorious past. Thus, Rome and its bishop came to represent for Western Christians everything that the Christian Roman Empire had once been and had stood for, and it became a model for the princes of the West, to be imitated as closely as possible. The popes, as imperial bishops with their eyes on Constantinople, were hardly aware of the universal admiration in which their city, and perhaps even their person, was held, but in 751, when the call from Pippin came, they did become aware of it and began to make use of it.

The papal endorsement of the Carolingian coup d'état in 751 is usually considered to be one of the founding moments of what came to be known as the medieval papacy. But for the time being the relations between the pope and the Frankish kings were not that different from those between the pope and the emperor in Constantinople. It was the task of the prince to govern the Church and to protect the orthodox faith. This is what the Carolingian kings thought and what they practiced. When Charlemagne heard about the decision of the second Council of Nicaea to restore the cult of icons, he immediately called all his bishops to a council in Frankfurt in 794, where he had the cult of icons condemned as a form of idolatry. Images and icons were for instruction, not veneration. Even when pope Hadrian I, who had signed the Nicaean decree, informed him that Charlemagne theologians had used a bad translation from the Greek, Charlemagne saw no reason to change his decision (Brown, 2003; Fried, 2013).

A few years later, in a letter to Pope Leo III, he told the pope that the task of the king was, first, to defend the Church against the pagans, and second, to promote and protect the orthodox faith. The pope's task was to pray for the king's success, just as Moses had prayed on the mountain during the battle between Israel and Amalek (Espelo, 2012). The east Roman emperor could not have agreed more.

But what about the imperial coronation in 800? Was that not the moment that it became crystal clear that in the West it was the pope and not the emperor who was the first in the Church hierarchy? But, formulating the question in this way, the underlying assumption is that it was Pope Leo III who took the initiative for the coronation. This assumption has come in for a lot of criticism in the past ten years. Scholars have pointed out that the concepts of 'emperor' and 'empire' were very much alive in the post-Roman world in the West. Princes who ruled over one people were kings, but rulers who controlled many different peoples were 'emperors', universal rulers just like the emperors of old. No early medieval prince ruled over as many peoples as Charlemagne. His many conquests proved him to be an 'emperor'. His courtiers, Alcuin for one, were sure of that. One did not need a pope to acknowledge that incontestable fact. Johannes Fried (2001) has convincingly argued that the idea to have a Roman coronation, to confirm what was in fact already the case, came to Charles in 799 when pope Leo III travelled to Paderborn to ask Charles for help against the enemies who had forced him to resign. The deal was that Charles would help Leo to regain his Papal See and that in exchange for that the pope would formalize Charles's imperial title. This happened on Christmas Day 800. The title of emperor was not a papal gift, but a distinction that Charles had earned entirely by himself because of his many conquests (Schieffer, 2004). It was his to pass on to the next generation, and that is exactly what he did in 813 when he crowned his only surviving son, Louis, emperor in the Aachen palace chapel (Nelson, 1991).

However, as much as Charles liked to think that from that time, as emperor of the West, he was the equal of the emperor in the East, the truth was that the relation between the Frankish monarch and the pope was very different from that between the emperor in Constantinople and the pope. In my opinion, the city of Rome was a mere outpost from the perspective of the imperial, East Roman Church: its bishop was honored as the first of the patriarchs, but he seemed more a relic of times past, when old Rome was the capital of the Empire, than a beacon for the future, a state of affairs to which the ruins of Rome testified. In the East everyone

knew what the true Roman and Christian traditions were; they lived surrounded by them, so Eastern Christians did not need the bishop of Rome to remind them of these traditions or to teach them how to keep these traditions alive. But in the West, as I said, the city of Rome was unique: it was the only place where the authentic Roman and Christian culture was preserved. The kings of the West saw themselves as heads of the Church in their kingdom, just as the emperor in the East did, but they still felt some nagging uncertainty regarding the correctness of their church traditions. The only place where they could check was in Rome and with its bishop, the pope. It was a slow process, but I think it is safe to say that in Carolingian Europe the bishop of Rome, the pope, acquired a unique position within the Western Church: not that of supreme head, but that of the unique authentic witness to the Roman Christian tradition.

A good example of this is Charlemagne's liturgical reform. Charlemagne was not sure that the liturgy in his many domains was up to scratch. I think he was quite right, if St. Boniface's letters, dating from a slightly earlier period, are anything to go by. Priests baptized new-born children *In nomine Patria et Filia*, the vernacular was used instead of Latin, funerals were followed by sacrificial banquets (Brown, 2003). In short, it was time to whip these semi-pagans into shape. Therefore, in the years 785-786 Charlemagne wrote a letter to Pope Hadrian I asking him to send a set of books that contained the proper Roman liturgical customs. On the basis of these Roman books, Charlemagne's advisers drew up decrees for the reform and the unification of the liturgy in all of Carolingian Europe (De Jong, 2012; Schatz, 1990). This set the tone for interactions between western rulers and the popes until the eleventh century: more and more frequently, the pope was consulted when princes, bishops and monasteries had to deal with complicated or delicate liturgical or juridical problems, but the final decision remained theirs and not the pope's.

After the division of the Carolingian Empire in 843 by the Treaty of Verdun, it soon became quite clear that East Francia, later Germany, was the true heir of the Carolingian state and its traditions. The reason for this was that the German monarchs founded their rule on the same foundations as the Carolingians had done: conquest and tribute. Thus, they were able to establish good relations with their nobles and keep the monarchy at the centre of power, as the font of honors and riches (Reuter, 2001). Under Otto I, the German armies defeated the Slav tribes east of the Elbe and extended German rule from the Elbe to the Oder. In 955 they beat the Magyars once and for all at the Lechfeld near Augsburg. Even more im-

portantly for the future of the German monarchy, from 951 onward, Otto I began to meddle in the affairs of Italy, an adventure that ended with his elevation as king of Italy. It began to seem as though Otto was a new kind of Charlemagne, a prince over many peoples. This is apparently is what Pope John XII thought as well, because in 962 he anointed and crowned Otto emperor of the Romans in St. Peter's in Rome. It is interesting and revealing to compare how Charlemagne and Otto interpreted the imperial dignity, and especially how they defined the ensuing relationship between themselves and the papacy.

The great Saxon chronicler Widukind of Korvey, our main source for the reign of Otto I, concluded that Otto had earned the imperial dignity because of his many victories over so many peoples. From 955, the year in which the Magyars were defeated, he called Otto 'king of the nations' and 'emperor of the Romans'. Nowhere did he mention the imperial coronation in Rome in 962, apparently because he adhered to the Carolingian conception of the imperial dignity, namely that a prince who had triumphed over so many enemies was emperor without any further ado and could dispose of the office as he saw fit. There was no need to involve the pope (Arnold, 1997; Keller, 2001a).

Other advisers of Otto's, such as Bishop Liudprand of Cremona, saw the imperial coronation as a new beginning, because from now on Otto carried a much more comprehensive and universal responsibility for the well-being of Church and pope than in the days when he was just the king of the Germans (Keller, 2001a).

How Otto himself thought about the imperial office we shall never know; we can only observe how he acted, and if we do so, we see that Otto's conception of emperorship differed very much from that of Charlemagne. During his long reign, Charlemagne spent very little time in Rome, perhaps four visits, the last one in 800 to restore Leo III to the papal throne. After that, when the pope had any business with the emperor, he had to travel to Aachen, where he was not always courteously received. Charlemagne never interfered with the internal business of the Roman Curia, and, even more importantly, he never meddled with papal elections. And, as mentioned above, he did not send his son Louis to Rome to be crowned emperor, but crowned Louis himself.

Otto, on the other hand, spent most of his time after his coronation in 962 and until his death in 973 in Italy, and he meddled constantly with Roman and papal affairs. He had Pope John XII removed and on two occasions he appointed a pope of his own choosing, completely ignoring the

wishes of the Roman people and the papal Curia. When the Romans revolted and elected their own pope, Otto had the man demoted to the position of deacon and sent into exile at Hamburg. I also think that is very important to note that Otto himself oversaw the imperial coronation of his son, the later Otto II, in 967 (Schieffer, 2001). In my view, this is proof that, unlike Charlemagne, Otto saw the anointing and coronation by the pope in Rome as essential for a legitimate succession to the imperial dignity. However, to ensure that everything went as it was supposed to, he started to interfere with everything that went on in Rome, to a much greater extent than the Carolingian emperors had done. The days in which the Romans and their popes were left to their own devices were over: from now on, they were under imperial supervision. By his actions, Otto created a model for the relationship between popes and emperors that was followed by all his successors for more than a century, in fact until the days of Henry IV and Gregory VII.

The new emperors even started meddling with the papal liturgy, and here it becomes very clear how different the relations of the Ottonian and Salian emperors with Rome and the papacy were from that of the Carolingians. When Charlemagne wanted to reform the liturgy, he had books sent from Rome, because it was there, so he thought, that the authentic traditions of the fathers had always been kept and honored. When Otto arrived in Rome for his coronation, he brought his own liturgical books along with him, the so-called Pontificale Romano-Germanicum, because he wanted to be sure that the rites used during the coronation were pure and proper. In later years he saw to it that the whole Roman liturgy was reformed on the German model (Kellerb, 2001).

His successors followed his example, which, incidentally, led to one of the most disastrous liturgical reforms in the history of the Church. Since the days of the Carolingians it had been the custom in the North to confess in the Nicene Creed that the Holy Spirit had proceeded not just from the Father but from the Father and the Son (*Filioque*). The Roman church had always omitted this interpolation and retained the original text, probably because they were aware of the effect a change in such a fundamental text could have in Constantinople. In 1014, when Henry II was in Rome for his coronation, he ordered the Creed to be changed and adapted to German custom (Schimmelpfennig, 2009). It was a step that, forty years later, led to a definitive breach with the Greek church which has not so far been healed.

With the accession of Otto III (983-1002), the hold of the German king-

emperors on Rome became even stronger. Otto I had appointed his own popes, but he had always chosen Roman citizens. Apparently the young Otto III was so disgusted with what he found in Rome that he decided to appoint popes from beyond the Alps, firstly his own cousin, Bruno of Carinthia, who became Pope Gregory V, and then his revered teacher, Gerbert of Aurillac, who took the name Sylvester II (999-1003): a significant name, since the first Sylvester had been bishop of Rome in the days of Constantine. Pope Sylvester addressed his young pupil in his letters to him as 'Caesar, emperor of the Romans, Augustus' and in one letter he exclaimed: 'ours, ours is the Roman Empire'. Whether they really intended to restore the city of Rome as the capital of the Empire remains a controversial question, but what is really significant is that Otto III went much further than his grandfather by choosing popes who had no connection with Rome and, indeed, had never previously set foot there. It seems as if Otto III thought that the Roman Church was so corrupt that only outsiders could save her (Althoff, 1996). To put it in another way: under the Carolingian emperors, the Church of Rome had been an inspiration for reform, whereas under their German successors she became the object of reform. The papal privilege of crowning the emperor was dearly paid for.

In 1046, King Henry III (1039-1056) set off to Rome to be crowned emperor, and like all his predecessors he was confronted with chaos even before his arrival in Rome. Three popes rushed to meet him to defend their claims to the Apostolic See. Consequently, in the small city of Sutri, the king called a synod, during which he forced all three popes to resign, and following the example of Otto III he invested one of his trusted German councilors with the papal office, and then another. These popes both died shortly after their appointments, and it was rumored that they had been poisoned by disgruntled Romans. But in 1049, Henry decided that only a real heavyweight could clean up the mess in Rome, so he appointed his own nephew, Bishop Bruno of Toul, who took the name of Leo IX (1049-1054). What Henry wanted from Bruno was what all his predecessors had wanted from their appointees, namely that they should see to it that the Church of Rome became a decent, respectable part of the imperial Church, so that the emperors could be assured of a legitimate and dignified coronation (Arnold, 1997; Herbers, 2012).

What the emperor got was something else: the beginning of the end of the imperial Church in the West. Bruno brought with him from the north a large following of priests and monks who were absolutely convinced that the Church had been erring for centuries, that it had become worldly and

depraved, and that it was their task to lead the Church back to the pristine purity it had enjoyed in the days of Christ and the apostles. Moreover, they thought that such a fundamental reform could only succeed if the pope were in charge of it, because only the pope had sufficient prestige to challenge the emperors and princes who for centuries had been using the church to shore up their own position. Now they had their chance. They fully agreed with the emperor that for such a reform to succeed it must begin in Rome itself by putting an end to the power of the Roman nobility, who for hundreds of years had treated the papal office as their plaything. It may sound odd, but until this time the election of a pope had been very badly organized. There was only the vague rule that the pope, just like all other bishops, had to be chosen 'by the clergy and the people'. In most countries this meant that in fact the kings or emperors appointed the new bishops, because they considered themselves to be the true representatives of the people. In Rome, it meant that the election of its bishop, the pope, if the emperor did not interfere, had become a tool in the hands of the Roman aristocracy, which pretended to act in the name of the people. In fact, this led to chaos and conflicts.

The famous decree of 1059, which entrusted the choice of the pope to the cardinal-bishops, was a revolutionary break with the centuries-old tradition that bishops had to be elected by 'the clergy and the people'. It was, however, the direct consequence of the wish of the reformers to eliminate for once and for all the disastrous influence of the Roman aristocracy, which for centuries had succeeded in treating the popes as their own puppets, as well as that of the emperor, whose claim that he was the true leader of the church was nullified by this decision (Laudage, 1993; Robinson, 2003). Nothing, of course, went exactly as planned. The Roman aristocracy recovered much of its influence in the fifteenth century after the Avignon period, and held on to it until the death of Pius VI in 1799. The emperors, also, continued to act as if they were still more or less the head of the Church. As recently as 1903 the Austrian emperor Franz Joseph I vetoed the election of the cardinal-secretary of state, Cardinal Rampolla, to the papacy, and his veto was respected by the cardinals. Nevertheless, from 1059, even the most reticent popes began to view their mission as a universal one, which they had to accomplish independently from and superior to any other ecclesiastical or secular authority.

It was Pope Gregory VII (1073-1085) who drew the most radical conclusions from this new view of papal authority. Even the most reform-minded popes before Gregory had always regarded the position of the

emperor and of the kings in the church as more or less sacred, and had recognized their responsibility for the wellbeing of the Church. Even the decree of 1059 gave the emperor his due share. Gregory, on the other hand, saw the emperor and all other princes as purely secular lords, whose position could be compared to robber chiefs, unless they submitted to the authority of the pope, who was the only person in the world who could guarantee peace and justice (Schmale, 1974). The Church, guided by the pope, had to see to it not only that the faithful turned away from the world to prepare for heaven, but also that in this world they were protected from princes and could live in peace (Cowdrey, 1970). This insight proved to be the foundation of the papal monarchy (Duffy, 1997). The role that the papacy played in Latin Europe from the middle of the 11th century on could be compared with the role that the United Nations tries to play in the present-day world, that of mediator in conflicts by virtue of an authority that surpasses all others, in this case the authority of God, embodied by the Vicar of Christ, the pope. It was the expression of a deep yearning for peace, justice and order. Until the secular princes were able to maintain law and order in their own territories, a position they did not attain before the 13th century, Rome and the papacy were the only expression of the will to make Europe a place of peace, not war, of justice, not power and of order, not chaos.

Gregory VII's first attempt to put these new theories into practice was an abysmal failure. In 1076, a conflict developed between the pope and the German king Henry IV (1056-1105), who had appointed a new archbishop of Milan of whom Gregory deeply disapproved. This gave Gregory a chance to put the new theories on papal power into practice. In 1077, he decided to excommunicate Henry IV and to depose him as king of Germany and Italy. It was a decision that shocked everyone in Europe, because never before had an anointed king been forced to abdicate. The situation worsened when the German princes, who wanted to get rid of Henry IV, supported the pope. The result was a civil war in Germany that turned ugly very quickly. The only thing that Henry could do to save his position was to try to make peace with the pope. In the middle of winter he travelled secretly to Italy, with his wife and child, and finally met the pope in the castle of Canossa in northern Italy; a timely encounter, since the pope was on his way to Germany to oversee the election of a new king. He had to do penitence by standing in the snow in front of the castle for three days, before the pope's advisers persuaded their master to admit him to the castle and to restore him to his former dignity (Laudage & Schrör, 2006).

But what looked like a triumph for the pope turned out to be a crushing defeat. Once Henry's royal title was restored, it was easy for him to defeat the German princes and re-establish peace in his German lands, so that he was now able to renew his quarrel with the pope (Robinson, 2003). In 1080, after Gregory had committed the fatal blunder of deposing the king once more, Henry travelled to Italy and met the German and Italian bishops for a synod in Brixen (Bressanone). The synod decided to depose Gregory, and, far more importantly, to elect a new pope, who took the name of Clement III (1081-1100).[1] The breach was now final with no chance of reconciliation. In 1084, Henry arrived in Rome, where his first deed was to install Clement III as the new pope. Next, he was crowned emperor in St. Peter's basilica. In the meantime, Gregory was locked up in the Castel Sant' Angelo, from where he sent secret messages to the Norman duke Robert Guiscard, the strong man in Southern Italy, to come and rescue him. Duke Robert heeded Gregory's request, came to Rome and rescued him, after which he subjected the city to the most gruesome pillage it had ever experienced. The Roman people never forgave Gregory for this. Accompanying the Norman troops, he went into exile in the south, where he died in the city of Salerno in 1085. The victory of Henry IV was complete, and all the good intentions of the reformers had come to nothing because their efforts had ended in this terrible bloodbath. Even one of the most committed reformers, Archbishop Lanfranc of Canterbury, regarded the imperial coronation of Henry IV in Rome as a splendid victory, only made possible by God's grace (Robinson, 2003). This could well have been the end of the reform movement and the return of the imperial church. However, this did not prove to be the case.

The reform movement was not just a matter for priests and monks. Many laypeople were just as concerned about the state of the church as the clergy. They wanted monasteries in which the monks kept to the rules and they demanded celibacy from their priests, so that both monks and priests could be more effective mediators between God and his people on earth, and could serve as an example for the laity of how to lead a perfect Christian life (Miller, 2009). But how could laymen, who were married and had children, lead a perfect Christian life without being celibate and living under monastic rule?

Their opportunity to become just as perfect as priests and monks was to follow Gregory VII in his view that the task of the church was not just to prepare the faithful for heaven but also to establish peace and justice in this world. Gregory was well aware that justice on this earth could not be

guaranteed just by praying for it. Sometimes a certain amount of violence was necessary to re-establish peace. In some of his letters, Gregory even expressed his opposition to young men joining a monastery, because they could serve God and help the church much more effectively by becoming knights and using their swords (Kathleen, 2005; Whalen, 2009). Moreover, Gregory believed that his responsibility for peace and justice here on earth was not limited to Latin Europe. He was well aware that in 1071 the Greeks had suffered a major defeat against the Turks near Manzikert, and that on the island of Sicily and in Spain there was constant war against the Muslims. In his eyes, the reform of the church could not succeed until the Greeks had been reconciled with Rome, the Muslims had been defeated in North Africa and the Holy Land had been returned to the church (Whalen, 2009). So Gregory needed soldiers who were prepared to die for Christ and his church. But before he could make any plans in that direction, he came into conflict with Henry IV, so that all other major projects had to be postponed.

That Gregory had understood the spirit of the time very well was proved by later events. In 1095, Pope Urban II, during a synod in Clermont-Ferrand, called on the knights of Latin Europe to stop fighting each other, but instead to come to the rescue of the Greek church and reconquer Jerusalem. With that call he launched the first mass movement in European history, because not only knights, but hundreds of thousands of ordinary people, mostly peasants, left everything behind to set off for the Holy Land and for the city where Christ had died and risen from the dead. For the first time, Christians throughout Western Europe felt that they were part of a single community sharing a single purpose that surpassed everything else – Christendom. And it was the pope who had unleashed that intense feeling of unity. Neither the emperor, nor the French king, nor any other prince had called for a holy war that united all Christians in one common purpose, but the pope.

The call to the crusades put the pope at the center of the church, but it was not enough. The crusade had to prove a success for the pope in order for him to be recognized as the only leader of church and world, and this is where it seemed to go wrong from the very beginning. It was not that the crusade was badly organized, but the army was simply not powerful enough to travel a thousand miles from Constantinople to Antioch through Turkish lands where they were constantly attacked by their enemies. Nevertheless, they managed to occupy Antioch in 1098, but it proved a hollow victory, because only days later Antioch was encircled by

a huge Turkish army. Fortunately the crusaders were saved by what they saw as a miracle, the discovery of the Holy Lance, the lance that pierced Jesus' side. This discovery sufficiently patched up the soldiers' morale for them to be able to defeat the Turks, but a blazing row between the leaders then weakened the army even further. Some wanted to abandon the expedition to Jerusalem altogether and stay in Antioch, while others wanted to continue (Asbridge, 2010). In the end, it was a very small and weakened army that finally reached Jerusalem. Perhaps the real miracle was that in the end they did manage to conquer the Holy City, on Friday July 15th 1099 at three o'clock, the hour that Christ had died on the Cross (Hill, 1962). Where the emperors of East and West had miserably failed, the pope succeeded: the Holy Places were returned to the Christian church. It was the most memorable victory a Christian leader had ever achieved. From this point, there was no more doubt in Latin Europe that the pope was the only head of the church and that all princes had to submit to his authority. But I hope to have shown that this was not the inevitable outcome of a long, continuous process that started in Late Antiquity. It was all sheer coincidence, perhaps most of all the capture of Jerusalem itself. Had the crusaders been defeated, which was more than likely at any time, the popes would have remained exactly what they were before: the venerable bishops of Rome who had to share their leadership of the Latin Church with the Holy Roman Emperor and the other princes of Western Europe.

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1. In official lists of popes Clement III is usually called an anti-pope, but that is theology, not history.

[3]

CHRISTIAAN VAN BOCHOVE

From Nijmegen to Asia in the eighteenth century

INTRODUCTION[1]

In his rich oeuvre Theo Engelen has studied many aspects of the demographic developments that characterized the Netherlands. To better understand how local historical circumstances influenced the demographics of large groups of people, he did what has become increasingly common among historians, namely, making comparisons with Asia. Surprisingly, however, Theo has not – or perhaps not yet? – studied the many people responsible for connecting these two parts of the globe during the seventeenth and eighteenth centuries. Perhaps this could be explained by the fact that his work focused predominantly on the nineteenth and twentieth centuries and that he has therefore overlooked – or saved for his retirement? – the rich sources that would make such an analysis possible. The sources in question are the ship's pay ledgers (*scheepssoldijboeken*) of the Dutch East India Company (hereafter, Company or VOC), which contain information on each ship that sailed to Asia and the employees who were on board.[2] This chapter follows in the footsteps of those who left Nijmegen – the town where Theo spent his entire academic career – and joined the VOC in the eighteenth century.[3] How many of them actually sailed to Asia? What happened to them there? And why did they leave Nijmegen in the first place?

This contribution adds to the literature on VOC employees who went to Asia.[4] This literature is diverse and has addressed changes in the origins of employees (Bruijn, 1976; Bruijn & Lucassen, 1980; Bruijn, Gaastra & Schöffer, 1987; Gaastra, 2010; Lucassen, 2004; Van Lottum, 2007), recruitment in and from VOC towns (Beers & Bakker, 1990; Delahaye, 2006; Dillo, 1987; Enthoven, 1989; Fernandez Voortman, 1994; Van der Heijden,

2002; Van Schouwenburg, 1988; 1989), and recruitment of foreign employees (Delahaye, 2006; Van Gelder, 1997; 2003). There is also a small amount of literature focusing on employees in particular occupations (Bruijn, 2011; Moree, 2002a; 2002b; Opper, 1975) and offices in Asia (Lequin, 1982). Recruitment of employees from Dutch, non-VOC towns has received virtually no attention, however (De Wijn, 2010). Consequently, information is only available for the number of employees from the Republic's inland provinces for five benchmark years. These data show that their absolute numbers increased between 1700/1 and 1720/1, but that they then almost halved between that time and 1790/1. Interestingly, the share of those who joined as soldiers ranged between 50% and 60% until 1750/1, but then declined to one-third by 1770/1 and one-fourth by 1790/1 (Bruijn & Lucassen, 1980, pp. 21-23 & 139-140).

With so little information about employees from the inland provinces, it is no surprise that next to nothing has so far been written on the relationship between Nijmegen and the VOC (Bouwer, 2002; Van Hoften, 2002; Rietbergen, 1983; Van Rijn, 1989; Wolf, 2002; Swart, 2007). However, following the completion of the database *VOC Opvarenden*, which digitized key information about employees from the ship's pay ledgers, it has become considerably easier to locate and analyze employees from a particular place of origin.[5] This Chapter exploits the database *VOC Opvarenden* to calculate how many people from Nijmegen joined the VOC, to speculate about what motivated them to do so, and to determine what their careers looked like. Some metrics that provide information on this have already been used in the pioneering studies of Van Schouwenburg (1988; 1989) and De Wijn (2010). Their studies did not, however, analyze the data on an annual basis, did not determine the exact lengths of careers, and did not try to systematically measure how push and pull variables determined recruitment patterns. Hence, this chapter not only improves our understanding of the lives of a substantial group of people from Nijmegen, but it also provides some new insights into the recruitment of labor by one of the most influential companies of the early modern period.

EMPLOYEES FROM NIJMEGEN

Isolating the Nijmegen employees in the database is easier said than done, since the spelling of (place) names was not standardized during the early modern period and VOC clerks therefore recorded what they heard or

Table 1: *Different ways of spelling Nijmegen in the ship's pay ledgers, 1700-1793.*[6]

RANK	PLACE NAME	N	%
1	Nimwegen	1,098	50.2%
2	Nimweegen	521	23.8%
3	Nijmegen	99	4.5%
4	Nijmweegen	91	4.2%
5	Nijmwegen	75	3.4%
6	Nimmegen	64	2.9%
7	Nimwege	52	2.4%
8	Nimegen	33	1.5%
9	Nijmeegen	32	1.5%
10	Other (n=44)	123	5.6%
TOTAL		2,188	100.0%

Source: Based on the database *VOC Opvarenden*.

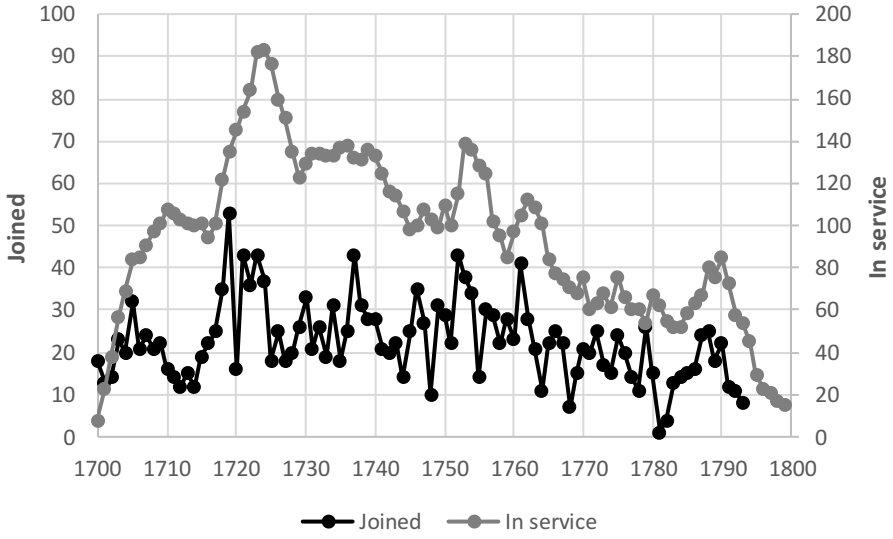
thought was correct.[7] The database consequently contains over 150,000 uniquely spelled place names, the overwhelming majority of which only appear once. Places are often referred to in dozens of different spellings and Nijmegen is no exception to this. Employees from Nijmegen were identified using a four-step procedure. Firstly, all unique place names starting with an 'n' and containing an 'm' were selected. This yielded 1,019 place names and 4,798 employees. Secondly, the relevant place names were identified manually from this sample. This reduced the number of observations to 62 place names and 2,611 employees. Thirdly, employees who joined at the Cape of Good Hope (N=179) were removed because they were also included in the database when they left the Republic. Finally, employees who signed on before the year 1700 (n=244) were excluded (see footnote 3).[8] After these steps had been carried out, a total of 53 place names and 2,188 employees remained (see Table 1).

Two entries that referred to Nijmegen in combination with another place were not included in this sample.[9] Also excluded were two entries – 'Nimwegen in beijeren' and 'Nimwegen in swaben' – that likely referred to the town of Memmingen in Swabia, a region in Bavaria.[10] Memmingen did not belong to the major recruitment areas of the VOC and hence was an insignificant place of origin for VOC employees. A broadly-framed query in the database *VOC Opvarenden* yielded only about seventy em-

ployees who might have come from the town. While it cannot be ruled out that employees from Memmingen have been wrongly included in Table 1, the number of such employees must have been very small. The fact that a quite substantial degree of spelling standardization existed, and that 'in gelderland' was added only once to the place name, further suggests that VOC clerks were confident about the place name they recorded in the ship's pay ledgers. This provides additional reassurance that Nijmegen in the Netherlands was indeed the 'default' referent for the place-name 'Nijmegen'.

The mere fact that people from Nijmegen signed on did not, however, mean that they actually sailed to Asia. Upon departure (especially during the period 1750-1790) 70 of them were recorded as being absent upon embarkation (*absent bij afvaart*). This could mean that they were in fact present at embarkation, but that they were no longer qualified for working. It could also imply that they had fled after pocketing an advance of two months' wages and selling an IOU, a so-called transport-letter, drawn against their future wages.[11] Excluding these absentees (who may not even have originated from Nijmegen, but may have mentioned it as their place of origin in order to reduce the chances of being caught) it can be established how many people from Nijmegen joined the VOC each year and how many were employed by the VOC at any given time during the eighteenth century. The latter can be established by exploiting information on the starting dates as well as the ending dates of labor contracts. Fortunately, the starting dates of all Nijmegen labor contracts are available in the database and are clean.[12] The same was true of most ending dates (2,048 out of 2,118 entries), but in 70 cases this date was absent, incomplete, or entered incorrectly. In some of these cases, typically involving shipwrecks, the database did contain the date of departure from Batavia, the date of arrival at the Cape of Good Hope, and/or the date of departure from the Cape of Good Hope. In such instances the latest of these dates was used as the ending date of the labor contract.[13] In the remaining cases, the original ship's pay ledgers were consulted and an ending date was added. This was facilitated by the fact that the Dutch National Archive has scanned the ship's pay ledgers, made them available online, and included a hyperlink to the relevant scan for each employee in the database *VOC Opvarenden*.[14] During this process, it also became clear that two employees – Johannes van Velo and Johannes Kloeters – had mistakenly been included in the database twice. This consequently reduced the numbers discussed above to 2,186 employees from Nijmegen in the database and 2,116 employees from Nijmegen who actually departed (see Figure 1).[15]

Figure 1: *Number of employees from Nijmegen who joined the VOC (per annum) and were in the service of the VOC (on 30 June), 1700-1799.*



Source: Based on the database *VOC Opvarenden*.

Employees from Nijmegen predominantly joined the Company in Amsterdam (N=923) and Zeeland (N=630), which were also the largest Chambers of the VOC. In most years, however, people from Nijmegen joined the Company in two or more of the other Chambers as well: Rotterdam (N=204), Delft (N=151), Hoorn (N=121), and Enkhuizen (N=87). On average, 22.5 men from Nijmegen were hired this way each year: about 4% of the VOC's hiring of employees from the inland provinces (Bruijn & Lucassen, 1980, p. 139-140).

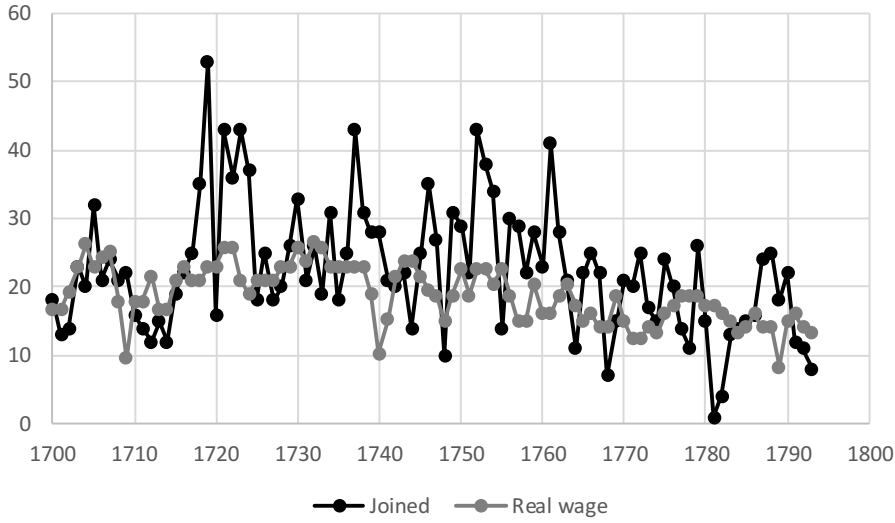
As it was not uncommon for people to join the VOC more than once, the employees in Figure 1 do not represent 2,116 unique individuals. Identifying those who appeared more than once is a complex task, however, because there is no unique identifier such as a social security number that can be used, names can be spelled differently, and people with similar names joined the Company. Those who would nevertheless like to make the effort could use the Levenshtein distance[16] between names to limit the set of potential cases and could use the ending and starting dates of contracts to restrict the names for which that distance should be determined. Still, it may be possible that conclusive evidence can only be obtained by resorting to additional internal (e.g. occupations; the names of

people to whom transport-letters and month-letters were made out) and external (e.g. marriage banns; burial registers) information. Due to its labor intensity, such an exercise falls beyond the scope of this chapter, but the cases of Dirk Beekman and Frans de Graaf may serve as examples.

The database *VOC Opvarenden* contains seven employees named Dirk Beekman: Dirk Beekman (N=6) and Dirk Pieter Beekman (N=1). The latter joined as a sergeant and the others as senior sail-maker (N=2) and gunner (N=4). Dirk Pieter Beekman is clearly the first unique individual who can be identified: he joined the Company in 1717 and died in Asia in 1740. Dirk Beekman, the senior sail-maker, might be the second unique individual. His first contact with the VOC started in 1746 and in 1748 he safely returned home. In 1757 he then joined again and died onboard during the same year. That this was indeed the same individual is not only supported by the identical occupation, but also by the almost identical names recorded on his transport-letters: E. van den Toorn and Van den Toren.[17] Dirk Beekman, the gunner, might then be the third unique individual. This is at least strongly supported by the fact that the dates of his subsequent contracts match neatly: 12-04-1751 to 24-04-1753 (repatriated), 12-06-1753 to 31-05-1755 (repatriated), 18-10-1755 to 01-08-1761 (repatriated), and 28-09-1761 to 14-08-1765 (deceased). The fact that this gunner did not die in 1757 distinguishes him from the identically-named senior sail-maker. Information relating to his transport-letters (i.e. the fact that three of the four were made out to J. Jansz and that H. van den Hurck cashed Dirk's wages during his first and fourth contracts) provide further support for treating this Dirk Beekman as the third unique individual.[18]

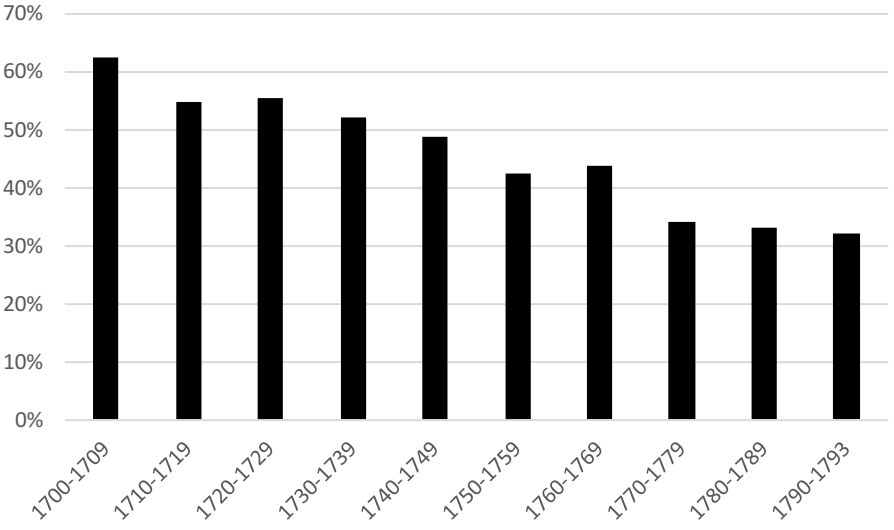
Frans de Graaf signed six contracts with the VOC as Frans de Graaf (N=1), Frans de Graaff (N=1), Frans de Graef (N=1), and Frans de Graeff (N=3). The dates of these contracts match well: 1-1-1713 to 31-7-1717 (repatriated), 23-1-1718 to 25-9-1722 (repatriated), 12-7-1723 to 24-7-1725 (repatriated), 15-1-1726 to 24-6-1727 (repatriated), 2-1-1728 to 26-6-1729 (repatriated), and 11-11-1729 to 13-7-1731 (repatriated). While De Graaf's occupations followed a somewhat random pattern (i.e. gunner, sailor, quartermaster, gunner, master-at-arms, and master-at-arms), the signatures that he made when collecting his outstanding wages look quite similar. It is therefore safe to assume that Frans de Graaf represented one unique person.[19]

Figure 2: *Real wages in Nijmegen (in liters of wheat per day) and number of employees from Nijmegen who joined the VOC (per annum), 1700-1793.*



Source: Based on the database *VOC Opvarenden*; Klep, 2005, p. 385; Tijms, 1983, pp. 315-317.

Figure 3: *Proportion of employees from Nijmegen who joined the VOC in military occupations, 1700-1793.*



Source: Based on the database *VOC Opvarenden* and a list of standardized occupations provided by Ton van Velzen.

Why exactly did people like Dirk Beekman and Frans de Graaf join the VOC? Their reasons were probably manifold, as is testified in the diaries and autobiographies written by some of the VOC's employees (Van Gelder, 1997; 2003). Using the trends and annual fluctuations in Figure 1, this section will try to identify some correlations that may help to improve our understanding of the recruitment patterns of (Nijmegen) employees.

As joining the VOC has often been considered a last resort, a logical first step is to consider living standards in Nijmegen as a push factor.[20] Using nominal wages of skilled building laborers and the December prices of wheat, a rudimentary real wage can be computed (Klep, 2005, p. 385; Söderberg, 1987; Tijms, 1983; Van Bochove, 2008; Van Zanden, 1999;). Although the 'last resort hypothesis' would lead one to expect to find a negative relationship between real wages and recruitment by the VOC (especially since the VOC was an attractive employer in times of high food prices, as it provided board and lodging on top of monetary wages), Figure 2 in fact reveals the opposite pattern: real wages and recruitment by the VOC moved modestly in tandem. Figure 2 corresponds with a correlation coefficient (R^2) of 0.14, which increases to 0.20 when a lag of two years is allowed for joining the VOC.[21] As there does not seem to have been an economic reason for such a relationship, the correlation is probably spurious. This is not unlikely, since the eighteenth-century decrease in real wages (which was not unique to Nijmegen, but was common to most parts of Europe; see Van Bochove 2008, p. 66-69) coincided with the growth of Nijmegen's civilian population size. The relationship between the size of Nijmegen's civilian population, which is available per five-year periods, and VOC recruitment is negative and has a correlation coefficient of 0.34. This relationship does have an intuitive economic explanation, as population growth went hand in hand with economic development, increasing employment opportunities, and better chances of earning a wage locally. Nijmegen's growth thus reduced the necessity of joining the VOC.

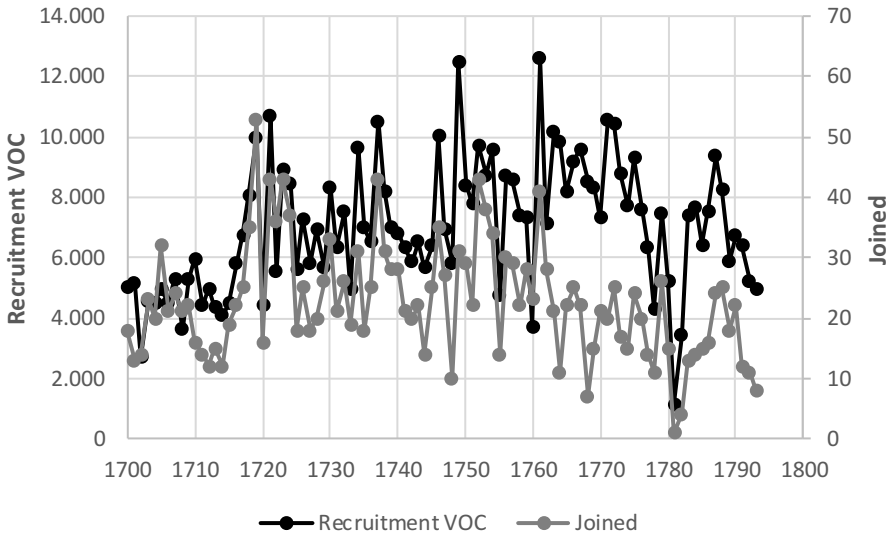
The jobs offered by Nijmegen's growing urban economy may also help explain the long-term change in the types of occupations in which people from Nijmegen joined the Company. The availability of nearby jobs likely raised the threshold for joining the VOC, which should have shifted the balance from those who joined in the unattractive military jobs in favor of those who joined in the more attractive maritime, manufacturing, and administrative jobs. This is indeed borne out by the data after standard-

izing all occupations into job types. As is demonstrated by Figure 3, Nijmegen employees joined relatively less frequently in military ranks as the eighteenth century progressed. During the first decade of the eighteenth century, for instance, as many as around 63% of them were still sailing out in a military rank and in two years this figure even exceeded 80%. Subsequently, however, the proportion of military jobs gradually decreased to around one-third during the last decades of the century.

It should be emphasized that neither changes in Nijmegen's position as garrison town nor changes in the VOC's recruitment of soldiers can explain this development. Research on the size of the garrison stationed in Nijmegen demonstrated that the size of this garrison decreased during the eighteenth century (Engelen, 2005; Nusteling, 2015). This process thus coincided with the falling importance of military occupations among Nijmegen VOC employees. If the size of Nijmegen's garrison played any role in recruitment practices by the VOC, however, one would have expected to find an inverse relationship. Discharged soldiers would then have joined VOC ships as an alternative to their Nijmegen garrison. Soldiers were surely welcome at the VOC: its hiring of soldiers almost doubled between the first and seventh decades of the eighteenth century. It then declined, but remained substantial during the final decades of the eighteenth century.[22] What must have been instrumental, though, in reducing the interest in joining the VOC in a military capacity was the increase in the mortality rates of soldiers caused by a malaria outbreak that plagued Batavia from the 1730s onwards. Of the soldiers who arrived from Europe in Batavia prior to 1733, about 10% died in the first year after their arrival. Due to the malaria outbreak, this figure increased to an astonishing 50%-70% (Bruijn, 2009; Bruijn, Gaastra, & Schöffer, 1987; Leuftink, 2008; Van der Brug, 1994; 1997).

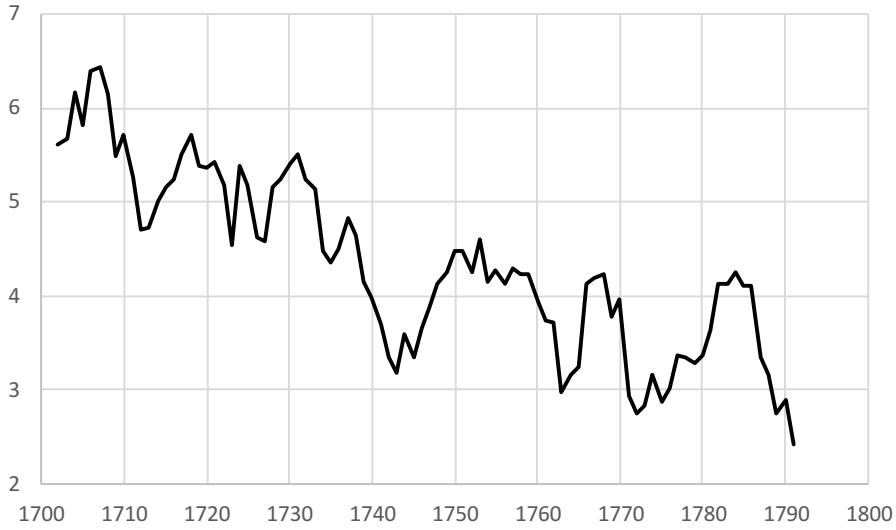
While the decreasing proportion of military occupations among Nijmegen employees can thus be explained by the growth of Nijmegen and the increasing unattractiveness of military jobs, this does not mean that the VOC's demand for labor was unimportant. The changes in the numbers of Nijmegen employees hired by the VOC were clearly associated (R^2=0.37) with the Company's fluctuating demand for labor (see Figure 4). This shows that not only the supply side, but also the demand side determined how many people left Nijmegen to join the VOC.

Figure 4: *Number of employees (from Nijmegen and overall) who joined the VOC (per annum), 1700-1793.*[23]



Source: Based on the database *VOC Opvarenden*.

Figure 5: *Average career length of Nijmegen VOC employees (centered five year moving average), 1700-1793.*



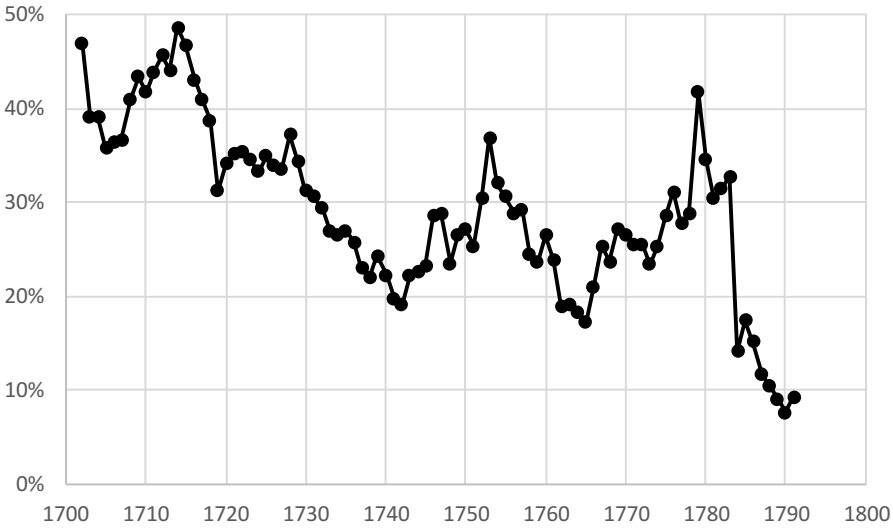
Source: Based on the database *VOC Opvarenden*.

Besides the number of people from Nijmegen who joined the VOC each year, Figure 1 above also shows how many of them were in the Company's service on 30 June of each year. Ignoring the first handful of years (since employees who had joined prior to 1700 were not included in the 30 June counts) the numbers in Figure 1 clearly peaked during the early 1720s and then went into an almost continuous decline. A good part of this can of course be explained by the decreasing numbers of people from Nijmegen who joined the VOC (R^2=0.29). However, the availability of the database *VOC Opvarenden* allows for an even more in-depth analysis of the process. This reveals that the length of the average career also decreased considerably. While a career of five to six years was common at the beginning of the eighteenth century, this had decreased to three to four years at the end of the century (see Figure 5). The literature has so far not been able to observe these trends as it has calculated career lengths in a crude way, by determining for periods of several years how many employees fell within particular ranges of career lengths (De Wijn, 2010; Fernandez Voortman, 1994; Van Schouwenburg, 1988; 1989).

These shorter careers were the result of several processes. The odds of returning decreased and the odds of staying in Asia increased, for instance (see Figure 6). A likely explanation for this is the VOC's policy of keeping as many employees in Asia as possible and of relying on experienced skeleton crews for sailing laborers and relatively empty ships to Asia and richly laden ships to Europe.[24] As skeleton crew members only sailed back and forth to Asia, the lengths of their careers were short. An increasing reliance on skeleton crews should thus have decreased the average career length of those who repatriated; something that is clearly supported by Figure 7.[25]

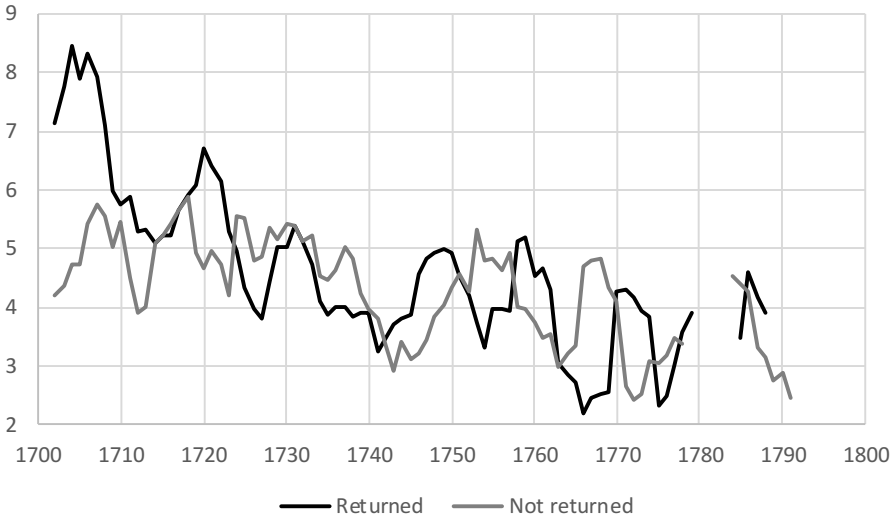
Figure 7 also shows a decrease, albeit less pronounced, in the career lengths of those who did not return to Europe. As only 12 Nijmegen employees settled in Asia with the status of free burgher (*vrijburger*), the end of a career for this group typically meant death: the database *VOC Opvarenden* explicitly records this reason for 84% of them, but if missing employees were included the figure would be higher still. The reasons for dying in or en route to Asia are well-known. On-board epidemics were a recurring phenomenon and could cause substantial casualties on specific ships. The malaria outbreak in and around Batavia (see above) also had severe effects (Bruijn, 2009; Bruijn, Gaastra, & Schöffer, 1987; Leuftink, 2008; Van der Brug, 1994; 1997). It is easy to see how disease hence reduced the career length of those who did not repatriate to the Republic.

Figure 6: *Proportion of Nijmegen VOC employees who returned to the Republic (centered five year moving average), 1700-1793.*



Source: Based on the database *VOC Opvarenden*.

Figure 7: *Average career length of two groups of Nijmegen VOC employees (centered five year moving average), 1700-1793.*



Source: Based on the database *VOC Opvarenden*.

By looking at the people from Nijmegen who connected Europe and Asia, this chapter has contributed to the literature in two ways. First, it analyzed an understudied group of VOC employees, those from the Republic's inland provinces. It became clear that Nijmegen provided a modest but not unimportant contribution to the recruitment of laborers by the Dutch East India Company. Based on the database *VOC Opvarenden*, this chapter identified 2,116 men from Nijmegen who joined the Company during the eighteenth century. However, when it is taken into account that some ship's pay ledgers are missing, their actual number may have been closer to about 2,200. It was found that, as the eighteenth century progressed, men from
130 Nijmegen became less interested in joining the VOC. This applied in particular to joining in a military capacity. This corresponds with overall patterns found for the inland provinces by Bruijn & Lucassen (1980). When compared to the work of Van Schouwenburg (1988, 1989) & Fernandez Voortman (1994) it also became clear that men from Nijmegen joined in less important jobs and returned less frequently than men from VOC towns. Using annual data, this Chapter also succeeded in calculating more accurate career lengths. This demonstrated a decrease for those who returned as well as for those who did not.

Second, this chapter determined, using simple statistical techniques, what factors pushed men from Nijmegen and pulled them to the VOC. The demand for labor, as measured by the VOC's annual hiring of employees, clearly played an important role. The supply of labor, however, was a more complex variable. Real wages and the size of Nijmegen's garrison did not explain much of the observed annual fluctuations of the number of men who joined the VOC. The size of Nijmegen's civilian population, however, was an important explanatory variable. By providing more and better alternatives close to home, urban development reduced the interest in last-resort jobs during the eighteenth century.

While this chapter has thus improved our understanding of the history of Nijmegen as well as the VOC, it does have its limitations. It could unfortunately not pursue internal and external record linking. The former could provide a better insight into the careers of those who joined the company more than once, while the latter could provide a better understanding of how marital and occupational status influenced people from Nijmegen to (not) join the Company. Whether Theo Engelen takes up these topics after his retirement remains to be seen, but there surely remain opportunities for future research.

Amsterdam City Archive, Geografische verwijzingen notarieel en ondertrouw (https://www.amsterdam.nl/publish/pages/753563/herkomstonderzoek_2.pdf).

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1. The author thanks Ton van Velzen for commenting on an earlier version of this chapter and for sharing his list of standardized occupations.
2. Dutch National Archive (=DNA), Archief van de Verenigde Oost-Indische Compagnie (VOC), 1602-1795 (1811) (entry number 1.04.02) (=VOC); Van Velzen (2006).
3. The analysis focuses on the eighteenth century because the ship's pay ledgers have survived more completely (c.95%) and uniformly across the Chambers for the period after 1700 than before. Van Velzen (2006).
4. This historiographical overview is limited to published research and does not address unpublished works.
5. DNA, *Database VOC Opvarenden*.
6. The category 'Other' includes Nimweege (22), Niemwegen (19), Niemweegen (8), Nijmege (8), Nimeegen (8), Nimmeegen (7), Nimweg: (5), Nimmege (4), Nijm weegen (3), Nimweg (3), Nijmmegen (2), and Nimvegen (2). Mentioned only once are Neijmwagen, Neijmweegen, Neimweegen, Nemweegen, Nemwegen, Niemwege, Nieumegen, Nieuwmeegen, Nieuwmegen, Nieuwmergen, Nijm wegen, Nijmagen, Nijmagh, Nijmegh, Nijmmeegen, Nijmweege, Nijmwege, Nijmwigen, Nimeege, Nimmeege, Nimmwegen, Nimweagen, Nimweeghen, Nimweg., Nimwegeen, Nimwegen in gelderland, Nimwegens:t, Nimweghe, Nimweigen, Ninmegen, Numweegen, and Numwegen.
7. The version of the database *VOC Opvarenden* that was used for this Chapter was downloaded from the website of the Dutch National Archive on 7 September 2017.
8. For one employee the database did not contain a year of signing on, but a manual check of the ship's pay ledger revealed that this person had joined the Company before 1700. He was thus not included in the final sample.

9. These were 'Nimwegen en drammen' (likely Drammen in Norway) and 'Nimweegen nieburgh' (likely Nyborg in Denmark). For place names and their historical spellings, see Amsterdam City Archive, 'Geografische verwijzingen'.
10. Amsterdam City Archive, 'Geografische verwijzingen' also includes Memmingen as 'Memmege', so the spelling resemblance is easily understood.
11. See *VOC Opvarenden* for the definition and Van Bochove & Van Velzen (2014) for wage advance and IOU. It is unclear whether a change in recording practices was responsible for the larger number of absentees during the second half of the century.
12. 'Clean' means that days are numbered between 1 and 31, months are numbered between 1 and 12, day 31 is used in the relevant months only, and days above 28 are correctly applied to the month of February.
13. *VOC Opvarenden* did not always correctly import these dates from the database *Dutch Asiatic Shipping*. In several instances the date was entered in the wrong column or copied incorrectly. In such cases Huygens ING, *Dutch Asiatic Shipping* was consulted and the dates corrected.
14. The dating procedure involved six steps. First, when ship's pay ledgers listed the year and month in which a contract ended, contracts were assumed to have ended in the middle of the month. Second, when ship's pay ledgers listed the year in which a contract ended, contracts were assumed to have ended on 30 June. Third, when employees went missing at an unspecified moment, the date of their latest wage payment was used. Fourth, in the case of 19 employees from Chamber Zeeland, for whom no information on dates was available at all, the average career length of employees who departed in the same year was used to establish when contracts ended. Fifth, in the case of a contract that ended on 31 June (even according to the ship's pay ledger), the ending date was assumed to have been 30 June. Sixth, the difference between the ending and starting date of contracts was calculated for all Nijmegen employees. In the handful of cases in which this turned out to be zero or negative, the ship's pay ledgers were consulted and the database changed accordingly.
15. As around 5% of the ship's pay ledgers are missing, the actual number will have been about 2,200.
16. The Levenshtein distance measures the similarity of two words by computing the number of character changes necessary to change one word into the other.
17. DNA, VOC, inv.nrs. 6201 (scans 62-63) and 6356 (scans 86-87).
18. DNA, VOC, inv.nrs. 13068 (scans 154-155), 14215 (scans 162-163), 14225 (scans 128-129), 14237 (scans 168-169).
19. DNA, VOC, inv.nrs. 5644 (scan 83), 5711 (scan 114), 5808 (scan 32), 5855 (scan 76), 5893 (scan 45).
20. See especially the older literature cited above.
21. It should be noted that, as the December prices are used, the two-year lag is actually smaller than two full calendar years.
22. Based on the database *VOC Opvarenden*. In relative terms the share of military occupations fluctuated between 30% and 40% of all employees recruited by the Company.
23. The 'Recruitment VOC' series includes 657,907 employees, so the 245 employees for whom no date of joining the Company was available, and who could therefore not be included in the figure, do not influence the main insight that this figure provides.
24. The authors cited above do not explicitly make this point, but it can be deduced from the career patterns that they demonstrated: the dominance of locals in higher functions, the lower death rates and higher return rates characteristic for such employees, and the fact that multiple contracts with the VOC were common among them.
25. Note that the rise of skeleton crews drove up the odds of not returning (as given implicitly in Figure 6) of non-skeleton crew members.

[4]

PETER RIETBERGEN

'Father and mother official': The district magistrates in imperial China and the Papal States

INTRODUCTION

Obviously, historical demographers aggregate all kinds of information that document the essentially unique vicissitudes of distinct men and women. Only by analyzing the resulting, generalized 'big data' can they hope to answer their questions about what moves a group, generally. Inevitably, however, this reductive approach entails the danger of losing sight of the very fact that our reconstruction of the past is always meant to uncover the actions and motives of specific people as well. For only thus can we understand our world, and our own, personal role in it – surely the rationale of all historical research. Those who knew it was their task to look both at the anonymous numbers of a 'population', and at the numerous individuals who constituted it, were the lowest-level administrators of central government in such early modern polities as, for example, China and the Papal States – the so-called district magistrates, or, as they were called in the papal monarchy, the city governors. I will use the terms indiscriminately. I have chosen to compare their perspectives and practices not only because Theo Engelen is a historical demographer who studies both China and Europe and is as convinced as I am of the need for comparative history, but also because, again like myself, he started out as a student of 'early modern history'. Last, but not least, in another part of our lives both of us try to give the world a sense of the past through the historical novels we write, always highlighting individual lives.

Interestingly, 'Judge Dee', the most famous district magistrate in Chinese history – and indeed the only one widely known outside of China – is the creation of a novelist, the Dutch Sinologist and diplomat Dr Robert

van Gulik (1910-1967) (Van de Wetering, 1989; Barkman & De Vries-Van der Hoeven, 1993). Though Van Gulik modelled Dee on a well-known official from the Tang dynasty, Ren-jie Die (630-700), his adventures as told in some sixteen novels are by and large fictional (Mc Mullen, 1993). Moreover, most readers may not realize that in China such officials did not primarily set out to solve the grisly crimes that form the staple of these stories. Rather, the district magistrate took care of all day-to-day administrative business pertaining to the often extensive territory he governed. And whereas Van Gulik's representation of his hero is decidedly idealistic, the way such officials are depicted throughout the many chapters of what is arguably China's greatest novel, Xueqin's Cao's (1973) mid-eighteenth century *Dream in the Red Chamber*, is more realistic, showing men like Yucün Jia and others often to have been lazy as well as, sometimes, corrupt. Last but not least, the roles and actions of a district magistrate were depicted realistically – though in the serious-comical way typical of Chinese traditional literary texts – by Nobel Prize laureate Mo Yan, in his acclaimed *Red Sorghum*, who chose the tumultuous 1930s as his setting.

Alas, no one ever felt that the European counterparts of these officials might deserve a novelistic presentation, too. Obviously, imperial China is more exotic than the Papal States in the sixteenth, seventeenth and eighteenth centuries. While I do not intend to remedy that situation – at least, not in this text – I do hope to show both the similarities and the differences between the roles and activities of these men and, thus, to contribute to our understanding of government in these at least superficially very different polities.

For my analysis of the governors in the Papal States I rely on my own research in the archives of the central authorities in sixteenth- and seventeenth-century Rome and the local ones in towns-cum-districts like the one I know best, i.e. Todi, in Umbria (Rietbergen, 1983a). For China, I use the studies cited throughout the text. However, my main sources are three 'handbooks' written to prepare a district magistrate / governor for his task – especially useful if he were new to it. For China, the manual most used during the Qing dynasty was *Fuhui quanshu*, 'A complete handbook concerning happiness and benevolence', by the seventeenth-century official Liu-Hung Huang (Huang & Djang, 1984) (cf. Huang 1996). It seems to have been the culmination of a long series of similar texts. For the Papal States, I rely on the *Istruttione per li governatori delle città e luoghi nello Stato Ecclesiastico* and the *Istruzzione per un prelato che va in governo*, two anonymous manuals written in the last years of the sixteenth century but con-

tinuously referred to during the following one (Rietbergen, 1979; 1983).[1] Presumably, these texts were composed on the basis of the (hand-written) 'exit memoranda' which a magistrate might leave to helpfully inform his successor about the peculiarities of his new district. Indeed, the authors may well have been former district magistrates themselves, as in Huang's case. However, it should be noted that in China these manuals were printed, indicating not only the prevalence of print culture in the empire, but, also the extensive readership such texts apparently did command. In the Papal States, the texts remained in manuscript, being copied whenever someone had a need for them (Rietergen, 1983). The contrast may also explain why, at least as far as I can judge, the Chinese manuals seem to be more systematically composed than the rather more ad-hoc papal ones.

THE ORIGINS OF STATE-WIDE ADMINISTRATIVE-BUREAUCRATIC SYSTEMS

Undeniably, state-formation in China long precedes the beginnings of the 'Patrimony of St Peter': the Xia, Shang and Zhou dynasties date back to the late third and early second millennia before the Christian Era, whereas the popes only started carving out a state of their own in the seventh and eighth centuries CE (Caravale, 1997; Dingxin, 2015; Feng, 2009; Noble, 1984). Equally undeniably, imperial China always was – and increasingly became – a territorially huge polity, whereas the Papal States, even at the time of their greatest extent, only covered about a quarter of the Italian peninsula (Hui, 2005; Wong, 1997).[2]

Nevertheless, to attain or retain power, every 'absolute' monarch, such as the Son of Heaven or the Roman Pontifex Maximus, who also ruled a temporal state (Prodi, 1982) needed to pursue a few essential policies. He had to create an efficient fiscal system to fund an army, to placate (read: bribe) competing elites, and to pay for a sumptuous and hence propagandistically magnificent and ideologically effective court. He needed to offer his subjects a basic degree of law and justice to guarantee public order and safety. And, last but certainly not least, he should take care to ensure sufficient food to prevent riots and other more serious forms of sedition that would almost certainly cause political disruption.

The existence, in a largely agricultural society, of, on the one hand, 'feudal' – the term is, of course, much disputed – as well as large-scale landownership, and, on the other hand, the growing power in such an

economy of regional commercial centers with increasingly large-scaled, sometimes even mechanical production, was always a complicating factor.

The only way to effectively wield central power as well as control the many, often centrifugal forces competing with it was the establishment of a bureaucracy that was government-controlled and, by that same token, preferably not made up of officials who belonged to those groups who were potentially independent stake-holders in the on-going contest for power over the state and its resources.

In China, the millennial process of 'bureaucratization' reached its formal culmination during the Song dynasty, i.e. in the tenth and eleventh centuries CE, when, at least on paper, reforms established a meritocratic system of recruitment and advancement in which officials (again at least formally) were the servants of the central government because they were paid a salary by the authorities in the capital rather than exacting their revenues from the people in their region.

By that time, the Papal States had come into existence as well, though as yet only in an embryonic form. During the sixteenth century, however, the papacy did succeed in enlarging its territory in such a way that it became the stable base that this theocracy had long needed to back its wide-ranging, indeed 'universal' ideological pretensions and claims to spiritual authority with real power, i.e. both financial and military. Finally, during the 1570s and 1580s, a series of organizational and administrative reforms undertaken in Rome did create a civil service that not only became effective state-wide (Rietbergen, 1983a), but also made the "Patrimonium Petri" one of Europe's most bureaucratically advanced polities, despite the fact that, partly due to its haphazard creation and partly due to the elective character of the papal monarchy and the far from powerless consultant role of the College of Cardinals, it was definitely not as powerfully centralized as imperial China.

A QUESTION OF COMPARISON, COMPARATIVE QUESTIONS

Whereas seventeenth-century China comprised around 1500 districts (Ch'u, 1962; Watt, 1972), with as many magistrates, the Papal States had no more than sixty (Weber, 1994). Yet, given the limitations of communication in pre-industrial times, governing any state, whether large or small, basically posed the same problems to a ruler who wanted to establish effective central control. This situation, I feel, justifies my comparison, and my

search for similarities. However, I should first stress some of the differences.

A major distinction between the two types of officials was certainly their formal background. To qualify, every district magistrate had to successfully pass the first stages of the imperial examination system. But what it gave him was a training as a scholar, a "literatus", especially knowledgeable in the (Confucian) Classics; in the Papal States, a governor had to obtain a university degree "Utriusque Iuris", i.e. in both Roman and Canon law.[3] Thus, whereas a papal governor had at least a theoretical understanding of the legal system, initially his Chinese counterpart had none.

In terms of inhabitants, most of the Chinese empire's districts, "hsien", were far bigger than the biggest "governorato" in the papal domains - sometimes comprising as many as a hundred thousand people. Also, the huge distances separating the outlying posts in particular from Beijing may have made any prospect of travelling to the capital, e.g. to confer with decision-making officials there, almost impossible – no wonder the magistrate was urged to facilitate the proper functioning of the imperial courier service (Huang & Djang, 1984) –, whereas in papal Italy such a trip, though strenuous too, was at least physically feasible. Admittedly, whether the papal governors actually undertook such visits, and if so, to what effect, I do not know. On the sub-central level, at least on paper the Chinese district magistrates had to travel whenever a conference was called by the regional prefect or the provincial governor. Since, as I suggested above, historical novels often provide the flesh to the bones analyzed by historians, one might read Van Gulik's *The Fox-Magic Murders* to see how the system operated. Although comparable higher-echelon bureaucrats existed in the Papal States as well, I have found no evidence that the city governors were forced to report to them.

Another difference was that a number of the districts in the Papal States centered around towns that retained vestiges of erstwhile political and, hence, administrative independence; it meant that the governor sometimes had to deal with city officials whom he could not entirely overrule (Rietbergen, 1983a). In China, this situation did not exist, since, unlike in papal Italy, the towns of the empire had always been subservient to the state. Consequently, the Chinese magistrate could often operate more freely than his papal counterpart.

Perhaps indicating deeper divergences between system and practice, in China the district magistrate had the use of, but also was supposed to diligently fill in dozens of pre-printed forms designed to document the vari-

ous fields of his duties.[4] This created a flow of information that, quite probably, was far more extensive than in papal Italy. Whether it also resulted in actions that were more efficient than those based on the manuscript bureaucracy in the pope's lands is a question difficult to answer.

Last, but not least, in Confucian China a magistrate's life and actions were inevitably determined by the fact that, like almost every man in the empire, he was married – indeed, might have several wives and, consequently, many children. A papal official of the gubernatorial rank had to be a 'prelate', which implied celibacy, as a consequence of having taken the necessary, though minor, ecclesiastical vows. While this formality would not of itself prevent a man from producing offspring nor, indeed, from deciding to take care of such children financially, the situation was still very different from the Chinese one. Imperial officials received very little by way of an official income, and, moreover, the real value of this income steeply declined with inflation in the course of the seventeenth and eighteenth centuries; this may have been one of the factors leading to the corruption that undeniably existed, though the term should be used with caution and its extent cannot be gauged with any real accuracy (cf. Kroeze, Vitória & Geltner, 2017). Generally speaking, in the Papal States, too, the salary of these officials was meagre, and it, too, declined for the same reason. But though corruption did occur there as well (the instructions for papal governors warn against it but in doing so outline what was, obviously, well-known practice), it was caused by personal rather than familial greed (Rietbergen, 1983a). Nevertheless, the negative effects for the citizens, as well as for the state's coffers, remained the same.

A cursory glance at the manuals indicates that, basically, three topics were most likely to occupy a magistrate's mind: the administration of justice, taxation, and food supply. Nevertheless, in both China and the Papal States, a great many problems of minor importance might still clutter up his daily routine. In my comparison, I try to include them all. Whenever I do not make a distinction between China and the Papal States, the reader may assume that my statements are meant to refer to both. However, let us first follow a newly-appointed magistrate, or governor, to his new district.

Of course, every magistrate had a past. If he was still a young man, he might have just passed the imperial exams or, in the Papal States, have recently earned his university degree before taking up his first position. If he were a bit older, he might have vacated either a previous post in another district or one in the capital.

Often, farewell parties would bring him congratulations and / or commiseration from friends who might think that the job, while being a career start or move, still implied banishment to 'the provinces': the capital was always the fulcrum of power, and of a socio-culturally satisfying life. Indeed, in China, a real 'poet kingdom', these goodbyes often occasioned sometimes moving poems, such as the 'Farewell to vice-prefect Du setting out for his official post in Shu', by the famous Tang-dynasty poet Wang Bo (Bynner, 1932).

If the new magistrate set out from Rome, or Beijing, he would do well first to visit his superiors in the central bureaucracy, who might fill him in on the do's and don'ts of his new task (Rietbergen, 1983a; Huang & Djang, 1984). In China, a magistrate was advised to carefully study the survey of all important issues concerning his district which the local staff would have compiled; he should also read the 'gazetteer' for the province in which his district was situated, as it would tell him all he needed to know about its geography and economy (Huang & Djang, 1984).

Arriving on horseback, by horse- or ox-drawn coach, or in a palanquin or sedan, at the gate of the city that would be his seat, a magistrate would without doubt be welcomed by the representatives of the local elites: city officials, the heads of the various guilds, the owners of the larger estates in the countryside, et cetera. Various instructions admonished a governor to conduct himself with a mixture of both "gravitas" and joviality (Huang & Djang, 1984; Rietbergen, 1983a). If he were lucky, once at his gubernatorial residence the magistrate might catch up with his predecessor in person, which would give him the benefit of a long talk about the problems of his new post. Mostly, however, the previous incumbent would have already left, and the new one would have to find his bearings by himself.

Usually, a governor would bring his personal staff (in the Papal States called his "famiglia") which might consist of only a few men, or, if he were wealthy, comprise a considerable group. These men, not paid by the government but salaried from his own pocket, were nonetheless essential to his functioning, since they served to counterbalance the three other

groups he had to work with, all of them part of the complex society he was entering (cf. Row, 2012; Rietbergen, 2013a).[5]

First, there were the servants of the governor's court, who were locally employed. Whether or not they had some education – in China, those who did not succeed in obtaining the higher degrees in the imperial examinations would sometimes occupy such posts – they certainly did have a great deal of experience regarding a magistrate's main tasks. However, being rooted in their own community, and having to take care of their families, they might well be inclined to supplement their low income with money taken from the people, as well as to back the same people whenever they felt that 'government' as embodied by the magistrate was acting repressively; thus, they would often obstruct rather than assist the magistrate.

Then there was the local aristocracy, the 'gentry', composed of landowners and wealthy city dwellers They were supposed to uphold the values of state and society on this, the lowest level, but, again, their own interests – financial as well as political – might run counter to those represented by the governor. For example, acting as tax farmers or as managers of public works, which they often did, their attitude towards fulfilling such roles with the state's interest uppermost in their mind might be decidedly ambivalent (Ch'u, 1962; Huang & Djang, 1984; Rietbergen, 1983a).

Last, but not least, there were the village headmen. Each district comprised a number of villages where, mostly, respected farmers, sometimes paid by the community, would take on a number of administrative tasks, as, for example those relating to keeping a record of the local population. For personal gain, or out of loyalty to the people in their community, these men, too, might not always be inclined to support the governor.

In short, all these groups often did secretly oppose the magistrate/governor - certainly in the fiscal field, and related matters - rather than working with him.

THE ADMINISTRATION OF JUSTICE

Both 'Tianxia', or 'All under Heaven', as imperial China called itself, and the 'Patrimonium Petri' were legal states, where government representatives could fall back on an extensive body of laws and ordinances. However, applying and enforcing them – their main task, which probably took up most of their time[6] – was certainly not easy. As indicated above, the

Chinese district magistrate was ill-equipped to exercise civil and criminal jurisdiction, since at the start of his career he lacked any knowledge of both legal theory and practice. In fact, he had to rely on the experience of his personal staff (Ch'u, 1962). The papal governor at least was well-versed in legal texts and, moreover, had two officials to assist him during court sessions, and in passing sentence. Moreover, he had a deputy who travelled the countryside to judge criminal cases in the first instance, which relieved him of some of his workload. However, the very fact that the traveling judge often visited villages after the harvest had made people feel prosperous and, hence, more disposed to settle feuds, was seen as a major disgrace, undermining the legal system (Rietbergen, 1983a).

Indeed, in the papal monarchy the state judiciary was far from perfect, and complaints abounded: most instructions for the local governors expressly concentrate on the many and various forms of abuse that were brought to the attention of the Roman authorities from all over the state. Actually, these boiled down to one major point, namely that the administrative staff involved often acted out of motives of personal gain: procedures were unnecessarily spun out to include an excessive number of paper stages that had to be paid for by the litigants, but profited the officials (Rietbergen, 1983a). Therefore, the governors were admonished to give weekly, public audiences (as their Chinese counterparts did), and, if possible, to pass sentence immediately, since many cases really were not complicated at all (Rietbergen, 1983a). Also, judges often commuted sentences that normally entailed corporal punishment or imprisonment into a monetary compensation, which was taxable by the court and thus benefited the bureaucrats involved. Moreover, this practice distinctly favored the rich, and, on the other hand, caused distress for the poor, who mostly could not pay and consequently had to choose between a more severe punishment and an escape into outlawry (Rietbergen, 1983a). One may also assume that such financial problems were among the many factors that, in China at least, induced parents to sell their female children into prostitution.

A problem of an altogether different nature was that the aristocracy (especially the great 'papal families', who had been given, or bought, huge estates, as had their imperial counterparts in China) still reigned over their possessions as 'feudal' lords, exercising all kinds of lower jurisdiction. Though theoretically the papal governor could serve as an appeal judge, his position was not always an easy one given the (in-)formal power of these magnates. Nevertheless, it seems that, increasingly, these represen-

tatives of the central government tended to 'side' with the people in their districts against the noble families who resented the 'absolutist' tendency of the papal monarch (cf. Fosi, 2007).

Unlike in the papal monarchy, in China, in dispensing justice the magistrate had no competitors – noble or ecclesiastical. He was the only person dealing with civil and criminal cases in his district: everyone who had a complaint, or against whom a complaint had been lodged, had to appear before his court first, though appeals to the higher authorities were always possible. To start with, every magistrate was told that it was his first duty to impress on his people that litigation should be avoided, since, essentially, it undermined what should be a harmonious society (Huang & Djang, 1984) – the fundamental aim of state Confucianism. In reality, the Chinese seem to have been very quarrelsome, and given the many case studies that Liu-Hung Huang included in his *Book*, crimes of every conceivable sort abounded, too (Huang & Djang, 1984). Indeed, after explaining, in great detail, what normal court procedure was, about a third of his manual consisted of specific advice in this field. In doing so, he perhaps meant to make up for the lack of training of the men who nonetheless had to conduct the complex process of reading and reviewing complaints; determining to accept or reject them; ordering subpoenas to be dispatched; bringing in and interrogating the suspects, if necessary through torture (though magistrates, again like the papal governors, were admonished not to resort to this action unless unavoidable); and, last but not least, giving a verdict and deciding upon the punishment that, as in the Papal States, could be and often was corporal, including the death penalty (Huang & Djang, 1984).

Of course, the handbooks and instructions I have studied, and the many different cases to which they refer, are but a small indication of the extent to which central governments were able to influence and, whenever it was deemed necessary, alter local conditions and (older) formal or informal power structures, such as those embodied by the local gentry. Yet, I feel one may argue that justice as dispensed by the magistrates and the governors and, often, reinforced by the higher courts, the tribunals of appeal, was an integral part of convincing the subjects – both of the emperor and of the pope-king – of the need to give allegiance to the state: 'the law' was an institution as well as a means to create legitimacy and discipline (cf. Schiera, 1995).

Though creating and upholding a legal organization that gave its subjects a sense of security and stability was of paramount importance to the state's survival, efficient taxation was equally necessary and its management therefore took up much of a district magistrate's time. However, this is not the place to explain the intricacies of the two fiscal regimes.[7] It must suffice to outline the magistrates' involvement in making them work.

In the Papal States, the tax system operated on the communal and the state level simultaneously. The cities and villages taxed their citizens, both directly and indirectly, remitting part of the proceeds to the central coffers. At the same time, the oldest department of papal bureaucracy, the 'Camera Apostolica', also sent out its own tax officials. Generally, however, taxes were farmed out to private entrepreneurs, who might be local businessmen or representatives of some of the large banks that took care of the papacy's (global) financial affairs. These middlemen would employ others to do the actual collecting.

Though they were not directly involved themselves (Rietbergen, 1983a), the governors were still told that it was their task to facilitate this complex system. Thus, they knew it was highly important to somehow keep track of demographic developments, both in the district capital and in the villages, if only because fiscal feasibility depended on it. Indeed, when the effects of the economic crisis of the 1650s became evident all over Italy, the Roman authorities suggested that the local population records as well as the land registers should be brought up to date, as they were afraid that the tax burden, if not adjusted, would cause social and political unrest among a shrinking population. To come to grips with the manifold problems, in 1655 the governors of the Papal States were ordered to undertake a general 'economic' enquiry. In the case of Todi at least, they eagerly complied, if only because they could in this way make clear the predicaments that their people, and, consequently, they themselves, were facing (Rietbergen, 1983a). Again, while not charged with any direct operations, the governors also had to deal with the innumerable lawsuits constantly generated by this tax system.

In China, taxation was organized rather differently and, at least, on paper, in a more systematized manner than in papal Italy. At the 'local' level the district magistrate was responsible for gathering both direct and indirect taxes. According to the handbook, this was his main task (Huang & Djang, 1984), although the instructions detailing his jurisdictional ac-

tivities were far more extensive, indicating that he probably spent the better part of the week presiding over his court and trying to solve myriads of legal problems. Nevertheless, ensuring the proper working of the fiscal system often seems to have been a headache.

Annually, taxes were gathered at the village level, where a village headman, appointed by the district magistrate on a rotating schedule, was given the task of being the 'tax prompter'. Since direct taxes were based on (units of 110) households and also on the amount of land owned by a household, the registration of households (by demographic recorders who in many cases were the selfsame village headmen) in a decennial census was of paramount importance (Huang & Djang, 1984).

Inevitably, most households would try to distort the quinquennial as-

sessment of their cultivated acreage, which had to be entered in the cadastral survey, in order to pay less land tax, and also to evade, as much as possible, the labor tax related to it (Huang & Djang, 1984). Moreover, since the village headmen as well as the demographic recorders were 'common men', and much of the land was owned by the local gentry, every district magistrate knew that these officials were easily influenced, or even badgered, into falsifying the data. To somehow check and correct all the irregularities was the district magistrate's responsibility as well. But even when the great landowners had been assessed (properly or not), the tax prompters would often be wary of forcing them to actually pay, and the district magistrate again had to step in (Huang & Djang, 1984). But if, as was probable, a governor himself came from such a family, would he have the drive and courage to act against them?

Last but not least, every district magistrate knew, or was expected to know, that these gentry families would offer to pay the taxes for the common men in their district, thereby in effect acting as tax farmers, since they would obviously claim a percentage of the money they had advanced (Huang & Djang, 1984), which, of course, in the end negatively affected the position of the poor.

Of course, many will argue that one of the main contrasts between China and the Papal States in particular, and Christian Europe more generally, was the pre-eminent position and, indeed, the institutionalized power, both legal and socio-economic, of the various Christian confessions. Some might even say this situation precludes any meaningful comparison. However, most scholars tend to forget that in imperial China the 'Buddhist Church', with its thousands of temples and monasteries, its high priests, priests, abbots and abbesses, monks and nuns, was equally insti-

tutionalized. Indeed, how to curb the power of this form of Buddhism was one of the major problems of imperial government. For the Church in China had enormous possessions, especially in the form of huge estates, and enjoyed considerable kinds of fiscal immunity (Walsh, 2010), as did the powerful, though less numerous, Daoist clergy.

Admittedly, in the papal monarchy, dealing with the Church's possessions (in the widest sense of the word) was even more of an intrinsic part of the state's administrative, economic and legal system; indeed, one of the central ministries in Rome handled everything related to 'Ecclesiastical Immunity'. Consequently, the Catholic Church in the Papal States was even more difficult to tax than the Buddhist Church in China. Yet, my own research has shown that, perhaps surprisingly, from the late sixteenth century onwards the need for a sound financial base from which to realize an increasing number of largely 'secular' political purposes induced the popes and the Roman Curia to limit ecclesial fiscal independence in their domain (Rietbergen, 1983a).

All in all, reading between the lines of the handbooks and instructions, one may conclude that, as in most early modern polities, in China and in the papal monarchy specifically the agrarian capitalists were often able to evade the fiscal demands of the state, thus shifting the burden of taxation onto the masses who were basically helpless – whatever the district magistrate or governor, forewarned about all such malpractices, might try to do.

FOOD SUPPLY

Arguably, one of the most important functions of the Son of Heaven (if not the most important), expressed in minute detail in his cycle of seasonal ritual, was the securing of heaven's support in providing a basic amount of food (mostly grain or rice mostly) to his subjects: only thus could the ruler prevent such outbreaks of civic unrest as might eventually result in full-scale rebellion and, indeed, in the loss of the 'Mandate of Heaven' by which he held power (Elvin, 1998; cf. Rietbergen, 2018). One might say that the pope, while fulfilling a priestly role to an even greater extent than the emperor – he was, after all, the "pontifex maximus" – nonetheless did not express his concern in the same ceremonial way, except that, of course, performing the (daily) Eucharist is indeed a food ritual "par excellence" (Rietbergen, 2011). He would also order rain prayers to be said throughout the state when droughts occurred that would endanger harvests and hence

the food supply – as did the Chinese emperor, and even, on the local level, the district magistrates (Huang & Djang, 1984; Rietbergen, 2003). In short, studying the politics and policies of the early modern popes makes it clear that in Rome matters pertaining to the food supply, though perhaps expressed in a less ritual form than in Beijing, were very much their daily concern as well (Rietbergen, 1983b; 2011). Indeed, during the seventeenth century, in virtually all instructions for papal officials, from the lowest district magistrate to the highest cardinal-legate, the necessity of a well-organized administration of everything relating to food is stressed because without it the peace and quiet of the state cannot be guaranteed (Rietbergen, 1983a).

In both polities, high-level bureaucratic agencies centralized the execu-
148 tion of the legislation involved: in China, the bureau of state granaries was one of the four departments of the Ministry of Revenue (Wil & Bin Wong, 1991); in the Papal States, from the late sixteenth century onwards a specific ministry was created for the 'Abbondanza' (though one should not conclude from its name that food was actually always abundant). While these agencies employed their own officials, even on the regional and local level, it fell to the district magistrate to ensure that their actions, which were often dictated by policy arguments and considerations formulated by the central bureaucracy, did not, as apparently happened, conflict with his analysis of and responsibility for the situation in his region.

Therefore, he should take care to know what amount of grain or rice his district could actually produce. To ensure maximum production, he should prevent farmers from being called upon to participate in the carrying-out of public works during the sowing and the harvest seasons. He should also prohibit grain and other foodstuffs from being exported from his district if this would endanger the well-being of its inhabitants. In papal Italy, this was not an easy task, if only because the popes, to give financial support to their relatives and other favorites, would often grant them so-called 'tratte' or export licenses; hence, if a governor felt that these contravened his own policy, he had to tread carefully indeed, for these favorites were powerful men who might harm his position or later career. The fact that, especially in times of scarcity, he also had to prevent merchants in his district from hoarding grain and using it as a means of speculation made his work not easier, either (Rietbergen, 1983a).

Unlike in the Papal States, in China a district magistrate was admonished to undertake a series of activities to help improve agricultural productivity, such as water conservancy, the reclamation of abandoned lands,

the planting of trees (fruit trees both for their nutritional and their economic value, mulberry ones for the latter reason), etcetera. Yet, reading the manuals, it is clear that in this field the magistrate would or, indeed, could act only through (repeated) public proclamations, which makes one doubt the effectiveness of his efforts (Huang & Djang, 1984).

On a more practical level, the papal governors had to ensure that the bread produced by the public bakeries was of a constant weight, again to avoid problems, especially in times of scarcity. To ensure that the people would trust the government in this, he also might consider having the price of bread as well as its quality and weight published weekly in the town square (Rietbergen, 1983a). For the same reason, the district magistrate had to keep an eye on the activities of the men who operated the public granaries, especially in times of famine, when the magistrate had to be particularly vigilant (Huang & Djang, 1984).

The same precautions applied to the sale of salt, which in both the Papal States and China was a state monopoly; in the Chinese script, the character for salt even included the stylized figure of a government official. The taxes levied on it brought the state considerable revenue, but the system was prone to corruption and speculation as well (Chiang, 2017; Huang & Djang, 1984; Rietbergen, 1983a).[8]

'GOOD GOVERNMENT'

The instructions for the papal governors include a number of general observations meant to help them in the execution of their duty. Foremost amongst these was that the repeated recommendation that they should undertake an inspection tour of their district. Since, for obvious reasons this could only take place periodically, they were also told that having spies in all necessary places might help them to diagnose 'diseases' in good time and take remedial action (Rietbergen, 1983a). In China, such inspection tours were deemed helpful as well (Huang & Djang, 1984), but the employment of spies was not, as far as I have been able to ascertain, publicly acknowledged. Yet, one might think that such men were necessary indeed, if only because in China the district magistrates were formally advised to watch out for the disruptive activities of the many and powerful secret societies (Huang & Djang, 1984; Watt, 1972).

In the Papal States, long-established and numerous groups analogous to the Red Turbans in China no longer existed, the stern policies of Pope

Sixtus v (1521-1585-1590) having eradicated most of them (Ownby, 1996; Hanlon, 2007). Yet the papal governors too were aware that, particularly in times of economic distress when oppressive taxation and unjust jurisdiction fueled local agitation, public order was endangered by growing sympathy for bandits and other outlaws, as well as the bolder actions of these groups (Rietbergen, 1983a). However, in this case both district magistrates and governors must have felt almost powerless since, of course, these phenomena often existed on a scale that greatly exceeded their territorial and administrative competence.

Comparing the instructions for the governors with the manuals for the district magistrates, one becomes keenly aware of the expectations and, indeed, governmental ambitions that, at least on paper, the Chinese functionaries were supposed to fulfil. To give but a few examples, they had to organize the first-level examinations for those young men who aspired to a career in state administration (Huang & Djang, 1984). To enable boys other than those born into the gentry to have a chance of entering themselves for these examinations, district magistrates were encouraged to persuade people in their district to establish and fund free schools (Huang & Djang, 1984). But they were also urged to attempt to convince the same people to show some largesse in supporting the destitute, for example by establishing foundling homes (Huang & Djang, 1984). For the poor, if not actually practicing infanticide (mostly by drowning new-born girls) would often abandon their babies (Huang & Djang, 1984). And so on, and so forth. None of these desiderata appear in the papal instructions. Of course, this does not mean these problems did not exist under the papal monarchy. One may interpret the silence either as a sign of a more realistic vision of what a governor could actually accomplish – the chapters devoted to these issues in the Chinese manuals smack of high-minded but perhaps impractical ideals – or to the fact that the institutional Church, especially through activities traditionally organized locally by parishes and monasteries, did take care of many of these matters.

Surprisingly, in a state in which religion reigned supreme, the governors in the papal domains did not (to my knowledge) fulfil anything like the number of ritual tasks expected from their Chinese colleagues. Nothing comparable to the task of observing, as chief sacrificer, the ceremonies in the temple of the City God and, several times a year, the temple of Confucius (Huang & Djang, 1984), was undertaken by a papal governor. Presumably, though, he would attend services conducted by the resident (often suffragan) bishop in the local cathedral.

Perhaps the greatest difference was that in China a very specific rite had been created which did not exist in the Papal States. From the time of the Ming dynasty, and during the Qing period as well, the district magistrate was obliged to periodically recite – or be present at the recitation of – the so-called 'Sacred Edict', or the '(Six) Instructions'.[9] These 'Maxims' were enumerated in article nineteen of the 'Ming Taizu' code, and, effectively, embodied the socio-political philosophy of state Confucianism. The citizens were admonished to obey their parents, respect the elderly and their superiors, live in harmony with their neighbors, instruct their children and grandchildren, be content with their allotted occupation or profession and hence their status in life, and not to commit any wrongdoing. According to the regulations, several times a year both in the district town and in the villages a man carrying a bronze bell would go round to summon the people to these readings. Though one may well doubt if attendance was actually strenuously enforced, the ritual's impact, enhanced by the beating of drums and the sonorous delivery and expounding of the texts (Huang & Djang, 1984), must nevertheless have been powerful. Also, for the great majority of the (illiterate) people, these moments may well have been the only form of instruction ever given to them in the basic values of Chinese society. This moral education was, in a sense, strengthened when the magistrate, four times a year, oversaw the festive publication of the registers that recorded the good and evil actions of individual men and women, and ensured that evil-doers were publicly humiliated while those who had performed good deeds were given garlands, ritual wine and a procession, with music, back to their homes (Huang & Djang, 1984).

Learning about theses rituals made me wonder why something similar did not exist in the papal monarchy. After all, what would have been more appropriate and, perhaps, effective, than a periodical public reading of the Old Testament's Ten Commandments – which, one might argue, were, in a way, the equivalent of the moral maxims encoded in the Sacred Edict? Yet, nothing comparable seems to have been considered by the authorities in Rome nor, indeed, did they opt for its 'logical' alternative, namely to have the Biblical laws regularly recited during Sunday mass which, after all, was a weekly obligation for each and every adult person.

After a period of three years that, according to many, was too short to get to know the complex ins and outs of his district (a situation that some observers also interpreted as a structural weakness of the Papal States[10]), the incumbent magistrate had to leave again.

Only large-scale prosopographical research would allow us to determine the (subsequent) career paths of the men who started as district magistrates and governors.[11] They might aspire to, or indeed – on account of their proven abilities, or their network – already have been promoted to a another, higher function. But although the triennial 'great reckoning' was meant to be an objective moment of appraisal in an assessment-based career track, in actual fact (so Liu-Hung Huang wrote) it often depended on the power of one's relations or the dispensing of gifts to the right people, e.g. those on the Board of Civil Office or the Censorate (Huang & Djang, 1984). Of course, in the papal monarchy, too, family influence or financial inducements might persuade people to help advance one's career.

Nevertheless, for whatever reason, not all officials did climb 'the ladder of success' (Ping-ti Ho, 1962), exemplifying the functional upward mobility made possible by the Chinese and the papal bureaucratic systems; indeed, perhaps after a series of other postings in the provinces, some or even many officials may have retired with the rank they had started with. Even so, a man who had commenced as a papal governor might eventually reach the cardinalate – the penultimate position in the papal monarchy as well as in the Church – and even the papacy itself, given the fact that the cardinals always chose one of their own to be the successor of St. Peter. In China, a former district magistrate could attain the highest offices in the empire's administration, such as that of imperial censor, president of one of the five ministries, or member of the imperial council. Or, as happened at least once, in the case of Hong Xiuquan, a man disgruntled because in the 1830s he had failed the imperial examinations, he might start a rebellion in order to himself become Son of Heaven. But then again, despite his many novel ideas this failed magistrate did not succeed in creating his "Tai Ping", his kingdom of 'Great Peace'.

But whether or not they were destined for higher honors and increased responsibilities, all district magistrates and governors had accomplished no mean feat. Exercising, as I have shown, a number of functions that, in comparison, do show striking similarities both in their underlying ideology and in their actual fulfilment, they had been instrumental in ensuring

good governance, "buon governo" – significantly the name of the Ministry of the Interior in the Papal States – for the people they had served in, so it was hoped, a 'fatherly, sober and political' way (Rietbergen, 1984a). Or, in Chinese parlance: they had been "fu mu guan", 'father and mother official', for the people entrusted to them (Ch'u, 1962).

Often, the work of these men was been easy since, inevitably, its constant displacements meant temporary, perhaps even life-long removal from friends and colleagues – those who had first become their comrades during their studies. Yet, the friendship formed during those early years would always sustain them, as the famous Tang-poet Li Bo suggested when, very eloquently, he voiced the feelings of a magistrate who had to say goodbye to his boon companions:

> With my comrades of the city who are here to see me off
> as each of them drains his cup, I say to him in parting:
> Oh, go and ask this river running to the east
> if it can travel farther than a friend's love!

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1. The various manuscript copies of the instructions sometimes bear different titles; see Rietbergen (1983a, p. 134).
2. Hui (2005) provides an interesting comparative perspective to avoid both Sinocentric and Eurocentric biases. In another way, so does Wong (1997).
3. The scholarly literature on the imperial examination system is huge. It is expertly summarized by Elman (2000; 2013). Alas, for Europe no such analysis of the system and its cultural context exists; however for the "prelatura" system, see Rietbergen (2013a, p. 84, 101-102 & 103-110).
4. Examples are given in Huang & Djang (1984, p. 156-180).
5. For the recruitment of experienced private secretaries see also Huang & Djang (1984, p. 80, 82-83 & 93-115).
6. For China see Watt (1972, p. 213).
7. For the background in China, a competent survey is provided by Zelin (1984, p. 1-71). For the Papal States, see Rietbergen (2013).
8. The Chinese state monopoly on salt was only abolished in 2017, after some 2,600 years.
9. In the version promulgated by the Kangxi Emperor, there were sixteen articles, see Huang & Djang (1984, p. 53-535). Cf. De Bary & Bloom (1960, p. 788 & 790); De Bary & Lufrano (2000, 11, p. 70-71 & 125-126); Rowe (2001); McDermott (1999, p. 299-351). However, the latter work is more concerned with the ritual than with the pact's content, context and consequences.
10. See the contemporary complaints quoted in Rietbergen (1983a, p. 142).
11. See my contribution to that topic through an analysis of all 276 men who attained the cardinalate between 1593 and 1667, in Rietbergen (1983a).

[5]

DRIES LYNA

Ceylonese arcadia?

Colonial encounters in mid-eighteenth-century Dutch Sri Lanka[1]

156

'(…) a malicious Step-mother, who together with her own children sits on the eggs of the inheritance of this first-marriage daughter' (Johan van Heemskerk, *Batavische Arcadia*, 1637)

With a remarkable reference to seventeenth-century Dutch prose, two Sinhalese brothers eloquently accused their stepmother of thievery in July 1755. Convinced that she had held back part of their inheritance, Anthony and Philip Gomes had brought her before the Dutch colonial court in Colombo, Sri Lanka.[2] In an attempt to persuade the council members of her wrongdoing, they wove in the timeless *topos* of the wicked stepmother in their plea, referring to the above-mentioned seventeenth-century prose work of the *Batavische Arcadia.* Although it was not uncommon for litigants in Dutch Sri Lanka (1640-1796) to quote influential European jurists from earlier centuries such as Hugo Grotius, the noteworthy use of a non-legal excerpt makes this petition stand out. These Sinhalese brothers consciously chose to position themselves on the colonial intersection of the Dutch Republic and Sri Lanka. But why did an anecdote from a seventeenth-century Dutch novel become part of an eighteenth-century Sinhalese family feud in the first place? What does this court case reveal about the encroachment of Dutch institutions in coastal Sri Lanka? And what can this example tell us about the cross-cultural colonial encounters of Sinhalese and Dutch socio-legal practices?

In the seventeenth century the Dutch East India Company (VOC) had replaced the Portuguese as the European presence in Sri Lanka. The Dutch assumed power in a vast coastal region populated by several hundred thousand indigenous inhabitants, with different religious and cultural backgrounds (Van Goor, 1996). Although their main interest was to secure

a profitable trade in cinnamon and elephants, the Dutch also installed religious and legal institutions (Schrikker, 2015). These churches, schools and courts of law not only governed the social worlds of the VOC employees and their next of kin, but also intervened in the everyday lives of Sinhalese, Tamil and other families in Sri Lanka (Schrikker & Lyna, 2019). This contribution will use the small window provided by the Gomes brothers and their stepmother as a means of looking at the much broader encroachment of Dutch institutions upon local families in eighteenth-century Sri Lanka. Starting from the legal documents of the Council of Justice in Colombo, and then incorporating archives from the Dutch Reformed Church, this research will thus explore the choices and constraints offered by these Dutch institutions to individual local inhabitants of eighteenth-century Sri Lanka.

A SINHALESE FAMILY FEUD

The protagonists of this story are Anthony and Philip Gomes, and their stepmother Bastiana Fernando, Christian Sinhalese inhabitants of the coastal city of Kalpitiya (Colpetty), about 150 kilometers north of Colombo.[3] Anthony and Philip were the oldest sons in a family of five, with two younger brothers and a sister.[4] Anthony was a little under 25 years old and unmarried when he began the suit; his brother was somewhat younger, but already married.[5] They came from a relatively well-to-do family, with several plots of land and a decent patrimony.[6] Their father Frans Gomes was an indigenous chief of the mid-ranking washer caste.[7] After Frans' death Philip had succeeded him as chief, and a couple of years earlier Anthony had taken up a position in the Dutch Reformed Church.[8] Their mother had died back in 1745 when they were only young adolescents, and soon after Frans had taken Bastiana as his second wife. The new couple had a fruitful marriage, and within eight years Bastiana gave birth to another two boys and two girls.[9]

The relationship between the children of the first marriage and their stepmother Bastiana deteriorated shortly after Frans Gomes died in September 1753.[10] Bastiana had accepted Frans' debt-ridden inheritance, but had immediately begged the Dutch governor of the island to sell off two gardens, which were legally not entirely hers. She was granted this exception, and when the properties were sold, Bastiana had called her stepchildren together in the paternal home in Kalpitiya. Much to the surprise

of Anthony and his siblings, Bastiana had made up her own allocation clause to divide the inheritance of her late husband. She felt entitled to half of the profit of the sold gardens, and wanted to divide the remaining half among her children and stepchildren.[11]

Anthony claimed that the children of the first marriage first had to be given their maternal half of the sold gardens, and that only the remaining half was to be divided by his stepmother. When Bastiana refused to reconsider her initial proposal, Anthony and his full siblings took the matter to the Dutch colonial court. Anthony and his siblings claimed that the two pieces of land had been handed down by their great-grandfather to Frans, one of them in full property and the other to share with his two brothers. However, Bastiana argued that these properties had been valued after Frans' first wife had died, and that a sum of money equaling their value had already been taken out of Frans' estate before he remarried Bastiana. That money was handed over by Frans to the *boedelmeesters*, a group of indigenous VOC officials managing the assets of (half-)orphaned minors. Therefore, according to Bastiana, the two gardens were fully part of her conjugal property, and thus her allocation clause was legally just.

In the end the last will of Frans Gomes tilted the suit towards the first-marriage children. Frans signed this document shortly before his death, when he was already sick and bedridden. In it, he conferred the two gardens to his first-marriage sons. In a final petition Bastiana tried to get this will annulled, as she felt that Frans had done wrong by her, leaving her with huge debts and little gains. Nevertheless – and not surprisingly, given the solid evidence – the court ruled in favor of the first-marriage children, but did not seem to follow up on their verdict, as three years later Bastiana had still not paid the first-marriage children.[12]

THE WICKED STEPMOTHER

Although the last will of Frans Gomes provided conclusive evidence, it was Anthony's and Philip's statement from a week later that delivered the symbolic blow to Bastiana's defense.[13] Eloquently phrased and carefully thought through, they urged the court to keep their stepmother tied to the Roman Dutch family law. Armed with specific references to Hugo Grotius' renowned Dutch law book, they proved that their father's will stood above intestate inheriting and was thus legally binding.[14] In addition, they refuted Bastiana's claim that the two gardens could have been

taxed and subsequently bought out of the conjugal property of Frans and Bastiana, as their father was bequeathed the gardens under the *fidei commissum*, and not in full property. This arrangement implied that the inherited gardens were not to be pawned, sold or divided, in order to keep them in the family (Roes, 2006). To support this argument on *fidei commissum*, Anthony and his brother Philip referred to a specific ruling described in a law book from a sixteenth-century lawyer, again displaying their firm knowledge of Roman-Dutch law.[15]

It is worthwhile to note that, despite their Sinhalese background, the Gomes brothers explicitly depended on the Roman-Dutch law of inheritance. Sinhalese rules of intestate succession could, however, have equally strengthened their case, as these stated that family property should always revert to the source (Rupesinghe, 2016). But throughout the entire case proceedings, not a single mention is made of Sinhalese customs, either by the Gomes Brothers or the defendant Bastiana. In lower colonial courts of eighteenth-century Sri Lanka, aspects of Sinhalese law were still honored, despite a growing dominance of company rules in family law. But before the highest court of their jurisdiction, the Gomes brothers relied on Dutch law books to strengthen their arguments. In itself this is not surprising, as the majority of litigators before the high colonial court in Colombo and lower courts in other jurisdictions did so, and mentions of jurists Hugo Grotius or Joos de Damhouder were omnipresent (Rupesinghe, 2016). What set the Gomes brothers apart from other litigators was their more literary approach to the plea, with a rich vocabulary, numerous metaphors and, above all, their references to non-legal publications. They started their statement as follows:

> "The lovely saying of lord Van Heemskerk in the Batavische Arcadia folio 175 goes that it is always the foul desire of an evil stepmother to keep on sitting with her own children on the eggs of the inheritance of first-marriage children, and the prosecutors [the two brothers, Ed.] unfortunately had to experience that for themselves."[16]

This passage comes from an erudite Dutch novel, first published in 1637, with at least ten reprints between that time and the mid-eighteenth century (Grijzenhout, 2004). The *Batavische Arcadia* introduced the new literary genre of the pastoral novel to the Dutch Republic. The book recounts the elegant story of a group of young men and women daytripping to the beach north of The Hague, indulging themselves in polite discourse on Dutch

history, law and customs. As they also brought up anecdotes about Batavia, the capital city of the Dutch East Indies, Van Heemskerk's book – together with its contemporary *Journaal van Bontekoe* (1646) – is considered as the archetypical colonial novel. It was a clear attempt to educate younger readers on national history, and a key narrative in the construction and self-image of the young Dutch nation and its colonial territories (Salverda, 2007). Although it is strange at first sight to find the novel filled with legal information and scholarly notations, it is no surprise, since Van Heemskerck himself was a lawyer, and even a relative of Hugo Grotius. He briefly worked as a legal representative for the VOC in London, and would eventually become a member of the Dutch Supreme Court (Salverda, 2007).

One of the stories told by a protagonist in the *Batavische Arcadia* features a wicked stepmother and the daughter of a rich nobleman, the most beautiful girl in The Hague. When the daughter fell in love, her stepmother became worried that a possible marriage would diminish both her share of the inheritance and that of her second-marriage children. She manipulated her husband into condemning his daughter's budding relationship and even locking her up in her room. But the young couple still found a way to secretly communicate and plot their escape. They managed to flee the house and leave the city, but after a dramatic carriage crash the young couple drowned in the river. Filled with regret, the father buried them together.

Starting off their plea with this brief reference to the *Batavische Arcadia*, the Gomes brothers immediately conjured up the powerful mental image of a wicked stepmother, who ruthlessly controlled her blended household, manipulating her husband like a puppet on a string and denying the first-marriage children their rights. But they did not leave it there, and throughout their statement Anthony and Philip Gomes wove in further images of wicked stepmothers taken from classical literature.

> "It should not surprise the Honorable Lords that one seldom hears that a stepmother treats the first-marriage children of her husband honestly and well, because 'noverca' in fact is the name of a stepmother, of which the learned Tacitus says that 'Novercale odium' is a bitter hate, to such an extent that in Latin the words 'bitter' and 'stepmother' are hardly distinguishable."[17]

The Gomes brothers tapped into a long history of negative stereotyping of stepmothers; in classical literature they were already hated figures, with

Tacitus' famous depiction of Livia as a scheming and ruthless manipulator. Stepmothers were portrayed as poisoning, murdering and greedy women, out for money (Barrett, 2001; Noy, 1991; Watson, 1995). Later on in their plea, Anthony and Philip even brought in a renowned Greek depiction of a wicked stepmother, when they referred to Bastiana as a "Xanthippe with her evil-talking tongue". Xanthippe probably was the second wife of the philosopher Socrates, depicted by the likes of Diogenes Laertius and Xenophon as a moody woman, always publicly complaining about how terrible her husband was.

One week after they offered the court Frans' will as definitive proof of Bastiana's offense, Anthony and Philip Gomes presented the court with this carefully crafted plea in which Bastiana's behavior was explained in a much larger objectified context of wicked stepmothers. Armed with specific references to Dutch, Latin and Greek literary representations of stepmothers, the brothers wanted to convince the court that stepmothers throughout history had always been embittered, dishonest and vengeful women, compelled by nature to mistreat children of previous marriages. Together with the undeniable proof of Frans' will, this eloquent plea further ensured that the court ruled in favor of the first-marriage children, granting Anthony and Philip the upper hand in the family feud with their stepmother Bastiana.

THE SEMINARY IN COLOMBO

The question remains how these two young Sinhalese men had acquired knowledge of these European literary sources in the first place, in such a thorough manner that they could make precise allusions to them in their own narrative. The answer probably lies hidden in the court files, with a small reference to Anthony Gomes as a 'leermeester'. An ordinance published by the Dutch government in Sri Lanka on 15 September 1758 tells us that a 'leermeester' was the name given to a specific Sinhalese native catechist of the Dutch Reformed Church, belonging to the *radā* or washer caste, just like the Gomes brothers (Hovy, 1991). This piece of information led us to explore the archived meetings of the Dutch Reformed Church in Colombo (Mottau & Koschorke, 2008b). It turns out that in 1751 – four years before the court case – young Anthony Gomes was the record keeper or writer (*kanakapulle*) of Reverend Mathias Wermelskircher, a professor at the Dutch Seminary of Colombo.[18]

This Seminary was founded in Colombo in 1696, six years after the first one was established in the northern city of Jaffna (Van Goor, 1978). In the 1750s, the Colombo Seminary offered both primary and secondary education to 24 indigenous students, half of them Sinhalese and half of them Tamil. They were recruited from good families, often from the circles of indigenous chiefs and interpreters. On average, students enrolled at the age of 14, and were offered a 6-year intensive training, in which they were only granted 10 days off per year (Van Goor, 1978). After a reform in 1740, the program had been centered around the study of classical languages, and the students also had classes on theology, Church history and even Dutch history.[19] They were trained to become schoolmasters, catechism teachers, comforters of the sick, proponents or even reverends, all local intermediaries who lived in the countryside and attempted to convert natives.[20] However, in everyday life the schoolmasters mainly functioned as Dutch civil servants who recorded births, deaths and marriages, rather than religious teachers (Schrikker, 2007; Van Goor, 1978). The Colombo Seminary was run by seven preceptors, or teachers: a Rector and Co-Rector, and five schoolmasters teaching Latin, Dutch, Sinhalese, Tamil and Hebrew.[21] Reverend Wermelskircher was one of these, and in December 1752 he would even become the Rector of the Seminary, and thus one of the highest ranking officials in the Dutch Reformed Church of Sri Lanka.

It is difficult to assess how Anthony had ended up on the radar of Reverend Wermelskircher, but perhaps information on Anthony's hometown of Kalpitiya can enlighten us: this was a strategically important trading settlement for the Dutch, up north along the coastline. This outpost was protected by a fortress, and was home to several Dutch institutions. Meeting reports from the Dutch Reformed Church in Colombo show that staff members of the Seminary were sent to Kalpitiya to visit the Church and school at least every other year. There they held services, appointed new deacons, admitted new members to the Church and baptized the children (Mottau & Koschorke, 2008a; 2008b). Visitations such as these were also crucial for seeking out indigenous students to recruit for the Seminary (Van Goor, 1978). Reverend Wermelskircher only went to Kalpitiya once, in December 1743, when he administered Holy Communion there and baptized children. Could it be that this was the moment when the Reverend met the 13- to 14-year old Anthony Gomes, and recruited him as a student?[22]

Enrollments lists of the Seminary have not been kept, but given Anthony's self-reference as a native catechist in the court files, he most likely

received training there in the late 1740s.[23] Both the Reverend and the other board members of the Dutch Reformed Church clearly held Anthony in high esteem, as in June 1751 they allowed him to take over some of the duties of a sick teacher.[24] For six months Anthony attended to the formalities of baptism and marriage in the midday services of the Wolvendaal Church in Colombo, in Sinhalese, Tamil and Portuguese, doing so without any form of payment.[25] It is highly unlikely that the Dutch Reformed Church would have admitted a young Sinhalese man to replace a Seminary teacher if he had no knowledge of classical languages or theology, further underpinning the hypothesis that Anthony must have been a student there previously. In December 1751, the board members would even recommend the Dutch Government of Sri Lanka to officially appoint Anthony and pay him for his services, but it remains unclear whether or not this actually happened.

As the students of the Seminary were taught in classical languages, it is plausible to infer that Anthony gained his knowledge of the classical writings of Tacitus and Plato as a student at the Seminary in Colombo.[26] Whether or not he became acquainted with the *Batavische Arcadia* via the same route is hard to tell, as it is still the case that little is known about book collections in the Dutch colonial territories.[27] But given its huge popularity in the Dutch Republic at that time, and its explicit references to 'national' history, the book most likely circulated among the Seminary staff and students, either as mandatory reading for a course on Dutch history, or as an interesting read in-between classes.

In the end Anthony's seemingly gratuitous references to *Batavische Arcadia*, the writings of Tacitus and the mentioning of Xanthippe could perhaps have been more than mere rhetorical instruments to blacken the reputation of his stepmother Bastiana. By mentioning these literary works, Anthony Gomes built on the education he had likely received at the Seminary in Colombo. Although the Seminary's main goal was to produce local-born religious and civil servants who could convert and control the indigenous population, this education had thus provided Anthony – and by extension his siblings – with the necessary cultural capital to engage in a multifaceted colonial setting. Whether consciously or not, this Sinhalese man wanted to appeal to the learned world of the council members of the colonial court. He hoped to be recognized as one of them, hinting at a shared cultural frame of reference. Moreover, by referring as two young Sinhalese men to a highly popular Dutch novel such as the *Batavische Arcadia* in an effort to win a case before the Dutch colonial court, Anthony

and his brother firmly placed themselves on the crossroads of the Dutch Republic and its overseas territories, just as the novel itself had done.

But perhaps Anthony was counting on more than a mere cultural connection with the council members. On closer inspection, three of the eight judges who presided over his lawsuit in the Council of Justice turned out to be officials in the Dutch Reformed Church of Colombo as well. As Elder and Deacons respectively, the judges Franchimont, Visser and Schokman had also been participating in the closed-door Church meetings, beginning two years before the Gomes-Fernando court case.[28] As such, both Anthony and these judges were members of the inner circle of Reverend Wermelskircher. By referring to his cultural capital built up as a student and / or staff member of the Seminary – headed by Rector Wermelskircher at that time – in front of three judges with close personal ties to that same religious official, Anthony was perhaps not only counting on his conclusive evidence to win the suit against his stepmother, but on his personal network of Dutch officials as well.

A CEYLONESE ARCADIA?

The rhetorical strategy of Anthony and Philip Gomes – relying on the former's training at the Dutch Seminary – strengthened their case, as they won their lawsuit against their apparently malicious stepmother Bastiana. However, a closer investigation of the legal position of widows and stepmothers in the eighteenth-century colonial context nuances this topos. Bastiana had tried to get the will of her late husband annulled, as she felt that he had done her wrong. But was this the case? If we look at the Dutch Republic, widows were relatively well-off compared to their counterparts elsewhere in Europe, as spouses – via their wills or in prenuptial contracts – often bequeathed to them more than the customary half, naming their wife principal heir or granting them usufruct (Schmidt, 2010; Schmidt & Van Der Heijden, 2016). Bastiana Fernando, however, was worse off than her counterparts in the Republic. Her late husband had only offered her usufruct of the house and the gardens, and distributed his most valuable property – namely the gardens – among his first-marriage sons. In addition, it becomes clear from the same will that Bastiana had little means of her own, as she could only give away negligible sums of money to her mother and mother-in-law.[29] When it turned out that she had received a debt-ridden inheritance from her husband, and that he had already se-

cured 1800 guilders for his first-marriage children, Bastiana therefore had little option but to ask the governor for a favor. Rather than a selfish choice to sit on the eggs of the inheritance, Bastiana's efforts to retain the profit of the sold gardens were more likely the survival strategy of a widow with little means, looking for a solution in a web of constraints.[30]

Her weaker position is further underpinned by the fact that three years later she was still involved in lawsuits to safeguard her inheritance. In 1758 Bastiana was sued by her brother-in-law Louis Gomes, who in 1755 had stood accused next to her by his nephews Anthony and Philip, and even testified on her behalf. Three years later Bastiana and her sister Gimara (who was the widow of the third Gomes brother, an uncle of Anthony and Philip) were apparently having usufruct of land belonging to the Gomes family.[31] Louis and his two sisters-in-law Bastiana and Gimara passed on the usufruct between each other, but now that it was his turn to receive the earnings from the land, Bastiana wanted to sell the property. She somehow made both Gimara and Louis sign a document by which they agreed that these properties were put up for public sale. During these proceedings Louis urged the court to force Bastiana to finally give his brother's children (i.c. Anthony, Philip and their siblings) their rightful part of the profits, referring back to the 1755 case.

But the image of the malicious stepmother Bastiana is not the only one deserving of some nuance, since it turns out that Anthony Gomes' persona was not as innocent as the court documents seem to indicate. The Consistory Minutes of the Dutch Reformed Church mention that in September 1754 – just before the court case against Bastiana began – he reportedly abducted a niece of his stepmother.[32] How this was related to the family feud over the inheritance remains unclear, but it indicates that the family ties were severely damaged before the suit. Both Anthony and Bastiana were excommunicated by the Dutch Reformed Church, pending further enquiry. Shortly after the verdict, Anthony asked a high official of the Dutch government in Colombo to be relieved of his duties as *leermeester* or native catechist. Could this excommunication have been the reason? In May 1756 the *Political Commissaris*[33] painted a rather startling image of Anthony during the Consistory meeting, accusing him of being "lazy, insubordinate and unworthy" and that "instead of catechizing in the homes of members and the poor, Anthony has spent all his time in his arrack, brandy and other material interests, and has not shown much interest in furthering the spiritual life of the congregation, to which he had pledged himself, as it has clearly occurred to me [*Political Commisaris* Ed.] from

his request last year to be relieved of his office" (Mottau & Koschorke, 2008b). Therefore, given the fact that he still referred to himself as *leermeester* in the court case against his stepmother, for some reason Anthony Gomes had asked to be released of his duties soon after the verdict. The Dutch Reformed Church seems to have followed Anthony's request and the recommendation of the *Political Commisaris*, and removed him from his office, never again to mention him in a meeting.

CONCLUDING REMARKS

The case study of Anthony Gomes is a remarkable example of the colonial cross-fertilization between Dutch and Sinhalese socio-legal practices. As the son of a mid-rank indigenous VOC official, his confession of faith to the Dutch Reformed Church had allowed the adolescent Anthony to appear on the radar of Reverend Wermelskircher. This connection ensured that Anthony was admitted to the elite Colombo Seminary, where he became the personal clerk of the Reverend and received training to become a native catechist. There he was introduced to both classical literature and Dutch history, and was able to build up considerable cultural capital. When Anthony and his siblings were caught up in a family feud with their stepmother Bastiana, he brought her before the Dutch colonial court to seek justice. In an effort to win the suit, Anthony strategically employed his cultural capital: he wove in references to the shared European literary heritage such as the *Batavische Arcadia* to appeal to the judges of the Council of Justice. In addition, at least three council members were part of the same social network around Reverend Wermelskircher, by now Rector of the Colombo Seminary and one of the highest officials of the Dutch Reformed Church in Sri Lanka.

In the end the story of Anthony Gomes can be read as that of a clever youngster, who consciously used the opportunities offered by Dutch institutions to further his own interest and that of his family. On the other hand there is also something tragic to this tale, as we are offered a glimpse of a talented and gifted young man who was trusted by the highest Dutch religious officials on the island, and granted education and job opportunities. But after a weird abduction story, his consequent excommunication and his resignation from the position of catechist, he seemingly fell out of favor with both the Political Council of Ceylon and the Dutch Reformed Church.

On a more general level this case study testifies to the all-pervading interaction between Dutch institutions and the everyday lives of local inhabitants in the eighteenth-century colonial context. The colonial apparatus imposed constraints on their social worlds and was occasionally even the vehicle of symbolic violence. But a more traditional top-down analysis of this encroachment of colonial power does not do justice to the opportunities these institutions offered to Sinhalese or Tamil people under Dutch rule, allowing them to negotiate and shape their own lives and those of their families, on the colonial crossroads of indigenous and European socio-legal worlds.

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2. Sri Lanka National Archives (SLNA), Dutch Records, Lot 1 (hereinafter SLNA 1), Vol. 4290: *Anthony Gomes and others contra Bastiana Fernando, Louis Gomes and Domingo Fernando*, 1755-1756.
3. Their Portuguese-sounding last names probably refer to an ancestor who was baptized a Christian and adopted a European name, rather than an actual Portuguese lineage.
4. After Anthony and Philip came Nathalia, Michiel and Frans Gomes. Frans and his first wife Maria Philipsz had a second daughter Saplina, but she passed away before the lawsuit began. SLNA 1/4290: *Dictum of the defendants Louis Gomes and Domingo Fernando*, 10 July 1755.
5. The defendants Louis Gomes and Domingo Fernando were the legal guardians of all the children of the first-marriage, except for Philip Gomes, who was already married. They used an extract of the so-called *schoolthombo* (sort of parish registers) to prove this to the court. SLNA 1/4290: *Dictum of the defendants Louis Gomes and Domingo Fernando*, 10 July 1755.
6. When their father Frans died, he left his children two plots of land and about 2000 rixdaalders. Their stepmother left her mother and stepmother a grand total of 30 rixdaalders. SLNA 1/4291: *Last will drawn up between Frans Gomes and Bastiana Fernando*, 16 February 1753. Anthony and his siblings came from a relatively well-off family, as their great-grandfather Louis Fernando de Fonceka had left his family no less than five gardens and nine slaves. SLNA 1/4314: *Transcript of the last will of Louis Fernando de Fonceka*, January 25 1725.

7. Frans Gomes is referred to in the court documents as 'Rajepakse Mohandiram van de wassers lascorijns' and 'reviseur of singaleese tale'. In Dutch Sri Lanka *mohandirams* were the assistants of the heads of the provinces (*modliaars* or *koraals*), and thus the second in rank of the indigenous chiefs. All of these chiefs were local elite as members of the highest caste of *goyigama* (Hovy, 1991). The *lascorijns* were indigenous soldiers, and a *wasser* the Dutch name for the *radā* caste (Rupesinghe, 2016). The term Rajepakse can be translated as 'loyal to the king' (Reimers, 1950). As the Portuguese and Dutch replaced the local king with a feudal system, this probably implied 'loyal to the Dutch'. Thanks to Luc Bulten for pointing this out.
8. SLNA 1/4290: *Anthony Gomes and others contra Bastiana Fernando, Louis Gomes and Domingo Fernando*, 1755-1756. The positions of Anthony Gomes in the Dutch Reformed Church are discussed later in this contribution.
9. These second-marriage children are called Louis, Augustinus, Saphina and Anna Maria and are mentioned as such in the last will of Frans Gomes. SLNA 1/4291: *Last will drawn up between Frans Gomes and Bastiana Fernando*, 16 February 1753.
10. The Censura Morem-meeting of the Consistory of the Dutch Reformed Church in Colombo dated 28 September 1753 states that they received news of the local schoolmaster that *mohandiram* Frans Gomes of Colpetty had died (Mottau & Koschorke, 2008b). There are no explicit mentions in the court documents of inter-familial difficulties before Frans' death, although the strong language used by the Gomes brothers in their pleas could refer to a longer troublesome relationship with their stepmother.
11. To be precise, Bastiana divided the other half into four equal parts: she kept another half of that, handed out a quarter to her four own children and offered the remaining quarter to her five stepchildren.
12. This 1758 case will be discussed later on in this contribution. SLNA 1/4314: *Louis Gomes contra Bastiana Fernando, widow of Frans Gomes and Gimara Fernando, widow of Michiel Gome*s. 1758.
13. There is no indication that Anthony was represented by a lawyer when he presented them with his *dictum* in the court's session of 18 July 1755. There is always a chance that the statement was written by a third party, but there are no indications to support that this was the case. The statement was preceded by the message "De twee eerste [referring to Anthony and his brother Philip Gomes] voor sig als de andere eyss(chers), dienen van den dictum, luijdende aldus", and concluded with "was getekent Anthonij Gomes & Philip Gomes". SLNA 1/4290: *Dictum of Anthony Gomes and Philip Gomes*, 18 July 1755.
14. This concerned the *Hollandsche consultatien en advijzen* of Hugo Grotius. More precisely: "vide het 3. Deel van de hollandse consultatien en advijzen pag 175 n 4 cons 59", "zie het voormelde derde deel pag 89 n 2 cons 26" and "sie het vierde deel van de holl. consultatien pag 729 cons 396". SLNA 1/4290: *Dictum of Anthony Gomes and Philip Gomes*, 18 July 1755.
15. This concerned a book of Cornelis van Nieustad (1549-1606), namely *Utriusque, Hollandiæ, Zelandiæ, Frisiæque, curiæ decisiones*, first published in 1602. In the court files the following reference is found: '8. Vonnis des leenhof van holland, zeeland en west vriesland, beschreven door cornelis van nieuwstad pag 226'. SLNA 1/4290: *Dictum of Anthony Gomes and Philip Gomes*, 18 July 1755.
16. "Het heerlijk zeggen van den heer van heemskerk in de batavische arkadie fo 175, namentlijk dat de vuijle begeerte van een quadaardige stiefmoeder altoos is, om met haar eijge kinderen op de eijeren den erfenisse van de voorkinderen te blijven zitten, hebben de eyss tot hun leetwezen thans seer waaragtig bevonden". SLNA 1/4290: *Dictum of Anthony Gomes and Philip Gomes*, 18 July 1755.
17. 'Geen wonder E.agtb. heeren een zelden hoord men, dat een stiefmoeder met haar mans voorkinderen eerlijk en welgehandelt heeft, want noverca is eijgentlijk de naam van een stiefmoeder en daar en tegen zegt den geleerden Tacitus dat Novercale odium een bitter

haad is, sulx dat men in de latijnsche woorden bitter en stiefmoeder weinig verschil vinden kan.' SLNA1/4290: *Dictum of Anthony Gomes and Philip Gomes*, 18 July 1755.

18. The term *kanakapulle* comes from the Tamil word *Kanakkapillai*, and the Dutch made it into *kannecappel*. It referred to an official, writer or clerck (Hovy, 1991).
19. In 1740 governor van Imhoff made several amendments to earlier resolutions regarding the Seminary in Colombo, including the division of the 24 students into three and not two batches (mixed-raced children as a new category), and two of the best students were sent out to the Dutch Republic for two additional years of study (Hovy, 1991).
20. The extraordinary Consistory meeting of February 5 1761 discussed a resolution from the Political Council of Ceylon, stating: "In the said Seminary, such subjects as children of Sinhalese and Tamil parents, but no mixties, casties, or such others of this kind, shall be trained from their very early youth, so that they may, after the necessary instruction, be in a position to be employed as efficient native schoolmasters,'Krankbezoekers', Catechism teachers, and according to the degree of their capabilities also as native Proponents, and even in exceptional cases as native Predikants, for the extension (i.e. spread) of the true Reformed religion among the native inhabitants everywhere in the country, or, if they are not inclined to serve in the schools or the churches, then at least for employment as native chiefs."(Mottau & Koschorke, 2008b).
21. In an Extraordinary meeting of the Consistory of 5 November 1759 it is stated that from now on there will be six preceptors instead of seven: "one Rector, one Co-Rector, one Latin Preceptor, one Dutch schoolmaster, one Sinhalese and one Tamil schoolmaster", with the Hebrew schoolmaster left out (Mottau & Koschorke, 2008b).
22. An extraordinary meeting of 12th December 1743 mentions: "The Rev. Mr. Wermelskircher reports that he administered Holy Communion at Tutucorin and Calpetty, and furnished a list of the children whom he had baptized at these places for record by the Scriba." (Mottau & Koschorke, 2008a)
23. However, as Anthony's name does not feature on the examination lists of the Colombo Seminary, he probably never completed the entire program (van Goor, 1978).
24. This was decided in a Censura Morem-meeting of June 25th, 1751 (Mottau & Koschorke, 2008b).
25. The minutes of the meeting do not mention precisely in which church Gomes attained to these services, but is was probably the main Wolvendaal Church in Colombo (Mottau & Koschorke, 2008b).
26. The list of study material does not feature Tacitus or Plato explicitly, but the Seminary's library more than likely held these works (Van Goor, 1978).
27. Joan Gideon Loten, who was Governor of the island at the time of the Gomes-Fernando lawsuit (1752-1757), had a copy of Van Heemskerk's novel in his possession when he was in office in the East Indies. In 1737 Loten had received a copy of Van Heemskerk's novel as part of a box with eleven other books when he was stationed in Semarang, Indonesia. It is most likely that he still had this copy with him when he travelled to Sri Lanka, and was governor there between 1752 and 1757 (Raat, 2010).
28. Arend Jansz. Schokman was elected Elder in November 1755, and held that position until his death in February 1757. Volkert Franchimont was elected Elder in November 1753, and kept that position all throughout the 1750s. Willem Visser became Deacon in November 1753, and Elder in November 1755, just when Schokman took up the same position. Visser was relieved of his office in 1758 (Mottau & Koschorke, 2008b).
29. SLNA 1/4291: *Last will drawn up between Frans Gomes and Bastiana Fernando*, 16 February 1753.
30. The current state of research does not allow us to determine whether or not Bastiana was an exception to the rule. However, some explorations in other court cases seem to indicate that other stepmothers faced similar challenges to Bastiana, where they were left hardly anything by their husband, who gave nearly everything to his first-marriage

children. The precise reasons for this apparent disadvantage or discrimination of colonial second wives will be the topic of a forthcoming publication within the abovementioned NWO funded project.

31. SLNA 1/4314: *Louis Gomes contra Bastiana Fernando, widow of Frans Gomes and Gimara Fernando, widow of Michiel Gomes*. 1758.
32. This was probably a daughter of Gimara Fernando, the sister of Bastiana. Further information is unfortunately lacking from the meeting reports.
33. The *Political Commissaris* was a representative of the highest colonial authority (*Political Council of Ceylon)*, and present at each meeting of the Consistory. The *Political Council* had the final word in appointing officials in the Dutch Reformed Church (Mottau & Koschorke, 2008a).

[6]

GEERTJE MAK

Counting People. Molding intimate lives into legibility in Dutch New Guinea

172 Historical demography is not my specialty. But for my work on gender in colonizing processes in Dutch New Guinea I found the kind of source that would make demographic historians' mouths water. In the late 1950s, the Dutch colonial administration decided to start registering the population of Dutch New Guinea and founded a department called 'Kantoor Bevolkingszaken' (Office of Demographic Affairs). Instead of a historical demographic interpretation of these sources, I would like to present you with some preliminary thoughts on this source in terms of governmentality and gender. The brief essay that follows is written in honor of Theo Engelen, to whom counting people has always meant that people count.

Counting and registering people is not something that comes naturally because a lot has to be done in order to register people. Registering does not simply reflect, it also affects the people involved, according to James C. Scott's argument in his now classic *Seeing Like a State* (Scott, 1998). In order to be able to count, to measure, calculate and control production, population and reproduction, a state needs to create clear standardized units. This does not only happen on paper; often, complex realities themselves first have to be streamlined in order to become easily legible for administrators and politicians. Scott offers a variety of examples of dramatically failed well-intentioned reform projects all over the world. One of his examples deals with the compulsory villagization in Tanzania under Nyerere in the 1970s: in entire regions people were forced to leave their original dwellings and semi-sedentary lives in order to start living in larger 'modern' villages with running water and healthcare. Shared machines would enable mass monoculture agricultural production for the global market. The complex traditional agriculture that used the diverse microclimates of each valley for growing different kinds of crops was re-

placed by a production streamlined for overview and administration. The project proved to be a catastrophe (Scott, 1998, p. 223-268).

Scott convincingly shows how the aim of monitoring and directing agricultural production demanded a clear ordering in reality. He concentrates on the destruction of the population's traditional ways of living and farming, but pays hardly any attention to the ways in which these large-scale resettlement programs may also have affected family, gender and kinship structures. After all, the politics of building 'model villages' was probably rooted in earlier missionary projects to create 'Christian villages', often set up around schools and 'redeemed' children (Becker, 2011). Such villages were intended to cut these children off from traditional ('immoral') ways of life and to create exemplary nuclear family units. The case of Dutch New Guinea may shed some light on precisely these gendered aspects of – in this case colonial – village (re)settlement programs.

In the 1950s, the Dutch colonial administration of New Guinea started a project to map all its inhabitants. After losing the decolonial war against Indonesia, the Dutch clung on to New Guinea as their last opportunity to prove that they could be good colonizers. A complete 'development' program was set up to improve the infrastructure, reclaim swamps, set up large-scale logging, agriculture and fishing, and improve the population's health and reproduction. One of the issues of concern was the population's fertility, a concern both fed by racist fantasies about the inevitable extinction of inferior races and concrete problems caused by (imported) STDs (Derksen, 2016). Such 'development' projects demanded the cooperation of the local people. How to involve, motivate, educate, train and discipline them was one of the most challenging tasks within this 'development' program. How to achieve this in practice? How to reach and direct people, how to change their way of life? This is what 'governmentality' is about: the question of how to govern in practice (Miller & Rose, 2013).

Family, households, sexuality and gender figure highly in problems of governmentality, as I hope to show further below (Mak, 2017). This had begun with one of the basic premises for governing: demographic administration. Simply registering people turned out to be a huge practical operation indeed. Administrators – each supported by twenty carriers charged with packages of a variety of forms, cans of traditional Dutch food and packets of dried soup – walked from settlement to settlement to register their inhabitants. They were on the move for months and kept thick logs with accounts of the many practical obstacles that they encountered. In each settlement, they had to fill in an impressive number of forms.[1] Per-

sonal cards (divided into male and female) for those above the age of 14; a family booklet, bearing the name of the mother; a form for the investigation of fertility; a house card (with a small map of the house's interior); and a 'collective register' organized by geographical region. There were also cards for registering deaths or births.[2]

All of the forms display the difficulties of using Dutch categorizations for the New Guinea context, and the efforts to accommodate local custom or 'adat'. Almost hilarious are the many kinds of marriage listed on the personal cards: only adat, adat and church, adat and civil, adat, church and civil, only church, only civil, unknown. Furthermore, the family booklet remarkably bears the name of the mother; it provides space for the registration of 16 children, and, for each child separately, the name of their father. On the personal form for women, there is space for four different husbands, and the children are categorized in terms of their 'legality': outside marriage, adat marriage, Christian marriage or civil marriage. This seems to be an adaptation of the form to Papuan custom, assuming that the mother may have easily changed her sexual partners. However, given the fact that most peoples in New Guinea knew marriage systems with huge bride gifts collected with great effort by the bridegroom, his family and larger social network, it is highly unlikely that women often changed their sexual partner. Was the Papuan sexual promiscuity assumed in these forms a Dutch fantasy, maybe, possibly based on a misunderstanding of sexual initiation rites (Herdt, 2006)?

On the so-called fertility form, even miscarriages and stillborn children had to be registered. One of the administrators carrying out the registration reports the difficulties to get the women to speak about these issues. He began to speak to women separately from the men in order to get the necessary information.[3] It shows how deeply the Dutch colonial administration penetrated the intimate spheres of its colonized subjects at the time in order to collect information. But the most intriguing are the house cards, where the people living in one house are registered. Here, too, the deeply penetrating colonial perspective immediately catches the eye: even the interior of each house is mapped, meticulously drawn on millimeter paper, often with nothing more than a fireplace in one corner (Figure 1), sometimes with a separate 'bedroom'. Originally, most Papuan peoples knew a system with so-called 'longhouses', with separate houses for men, for women and young children, and for adolescent boys. On the house cards, the administrators tried to combine this with the system of nuclear families, witnessing the following mind-blowing categorization (Figure

2): I Children group (unmarried children linked to family); II Parents group: A Married couples (men and their wife/wives, if living together), B Separately living heads of the family (if living together with unmarried children); III Other inhabitants (remainders of disintegrated families, etc.).

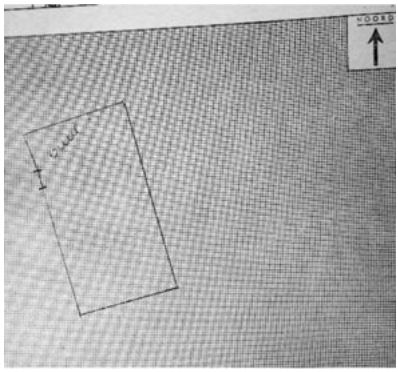
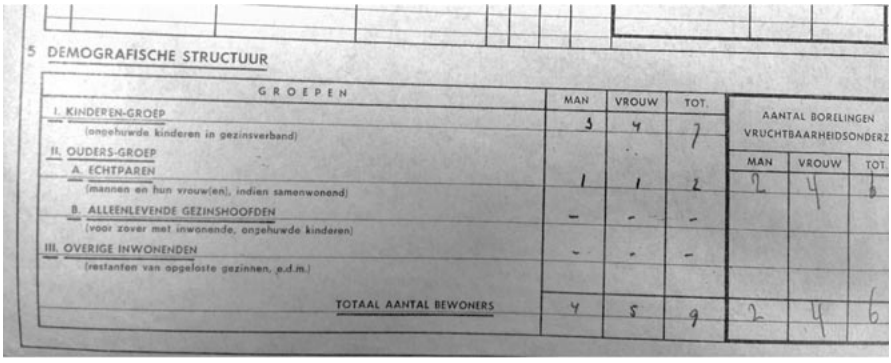


Figure 1. House cards district Numfor[4]


5 DEMOGRAFISCHE STRUCTUUR

GROEPEN	MAN	VROUW	TOT.	AANTAL BORELINGEN VRUCHTBAARHEIDSONDERZ MAN	VROUW	TOT.
I. KINDEREN-GROEP (ongehuwde kinderen in gezinsverband)	3	4	7			
II. OUDERS-GROEP						
A. ECHTPAREN (mannen en hun vrouw(en), indien samenwonend)	1	1	2	2	4	6
B. ALLEENLEVENDE GEZINSHOOFDEN (voor zover met inwonende, ongehuwde kinderen)	-	-	-			
III. OVERIGE INWONENDEN (restanten van opgeloste gezinnen, e.d.m.)	-	-	-			
TOTAAL AANTAL BEWONERS	4	5	9	2	4	6

Fig. 2 House card district Numfor[5]

The forms clearly show that the registration of people did more than just 'counting': it forced very specific, modern Western European ways of understanding marriage, sexuality, households, and children onto the diverse peoples of Dutch New Guinea. The centrality of the issue of fertility, as well as the obsession with organizing sexuality and kinship in the form of nuclear families, is very obvious. These registrations did not record anything about the ways in which these peoples originally understood and dealt with such issues. Or in other words, the forms did not help to know

the people from New Guinea, but imposed specific Dutch grids of knowing on them. I added 'originally' to the sentence before last, because there is one more thing to say about these forms: the administrators and their forms were almost entirely limited to those areas of New Guinea where Protestant and Catholic missions had created strong footholds. They were not very 'original' anymore. The maps showing where the demographic project was fully carried out clearly show this. The easy explanation for this is that these were the only places the administrators could travel to – even when they were supported by twenty local carriers, travelling in New Guinea was extremely difficult.

But there is more to it: these are also the areas where missions had successfully carried out colonial civilization projects in close collaboration with the colonial administration. Such civilization projects aimed at fundamental changes in ways of living and entailed a complete restructuring of Papuans' sexual, family and kinship structures. The upbringing of children in 'proper' families and their education in Christian European schools were seen as the key to change. Good households with morally sound mothers could discipline their children into healthy and productive ways of life. Maaike Derksen (2016, p. 12-19) has carefully described how Catholic missions in the south of Dutch New Guinea had set up a program for schools and model villages from the 1920s onward, resulting in about 200 schools and villages in the early 1940s. This large-scale program was carried out mainly by gurus from the Kei and Tanimbar islands in southeast Maluku and subsidies of the colonial administration. These kampongs consisted of houses for nuclear families. The people were forced to work the land, take care of the buildings and infrastructure, and send their children to school. For the Protestant northern part of Dutch New Guinea, my research has shown that Protestant missionaries started to set up Christian villages as early as around 1900 (Mak, 2017). I suspect they developed resettlement programs similar to the Catholic missions. The category grids that the forms imposed on Dutch New Guinea's population did not travel much further, it seems, than the places where the actual situation had thus already been made 'legible' to Dutch colonial eyes. I would not dare to say that housing resettlement programs were done in order to make the situation in Dutch New Guinea legible; what can be said is that, obviously, only in those areas had it become legible to the Dutch. And not just that: the creation of a structure of nuclear families – or something in that direction – created a strong point of entrance into the disciplining of a new generation. The forms show indeed how deeply

colonial administration could interfere with the intimacies of these already resettled Papuans' lives.

In conclusion, counting people does much more to people than it seems to at first sight. Concentrating on the how of the counting, on the mundane techniques of filling in forms, it becomes apparent how much knowing a population is related to molding it. Structuring the population in nuclear family units and controlling sexuality were at the heart of that molding, in this case. Moreover, here it turned out that the act of registering was accompanied by a deep penetration into people's intimate lives, showing that such counting does not just prepare for governance, but already is the execution of governmental power.

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2. NA 2.20.60.05 Demografisch Onderzoek NNG, 69 basisformulieren.
3. NA 2.20.60.05 Demografisch Onderzoek NNG, 46 journaal E. Andriessen, 4 juli 1962.
4. NA 2.20.60.05 Demografisch Onderzoek NNG, 93.
5. NA 2.20.60.05 Demografisch Onderzoek NNG, 93.

[7]

MARIT MONTEIRO

Scripting the exception. Gender, confession and profession in the post-war Netherlands

A biographical case study of the psychiatrist Anna Terruwe (1911-2004)

The Catholic psychiatrist Anna Terruwe was a well-known public figure in the Netherlands during the Seventies. Her talks and publications attracted much popular attention, and in consequence her name was constantly being brought up in the media. In 1977, she was invited for an interview by her royal highness Princess Margriet, the daughter of Queen Juliana and Prince Bernhard. *Libelle*, one of the most popular weekly women's magazines in the Netherlands, had enlisted the princess as 'reporter for one day'. In this capacity, Margriet was free to conduct an interview with a person of her choice. She chose Anna Terruwe and they met for the interview in Margriet's palace (In 't Veld, 1977). Anna Terruwe was 'largely unknown to the wider audience', according to the princess. In her opinion, people would benefit from learning more about Terruwe's ideas.[1] The interview of the Catholic psychiatrist by the Protestant princess was published in August 1977 and testified to the rapid process of de-confessionalization in the Netherlands since the end of the Sixties, the breaking down of religiously and ideologically defined barriers that had defined the social and cultural organization of Dutch society since the end of the nineteenth century (Schuyt & Taveerne, 2000). Terruwe contributed to this process in a professional capacity by challenging ecclesiastical control over the personal lives of Catholics. Her approach led to an investigation of her psychotherapeutic method by authorities of the Roman Catholic Church in 1950. In 1956 an official ecclesiastical warning was issued against the moral orthodoxy of her psychotherapy practice, although she was not identified by name (Monteiro, 2018). In October 1964, Terruwe defended herself against such allegations in a lengthy text that she published and

disseminated privately (Monteiro, 2010; Terruwe, n.d.). Within a year she was cleared by the highest authority of the Roman Catholic Church. This vindication was mentioned as a significant shift in church policy by *The New Yorker* in September 1965. The matter had developed into an affair that unequivocally demonstrated that the Roman Catholic Church was indeed in need of the renewal that the Second Vatican Council (1962-1965) had aimed to initiate (Rynne, 1965).

When Princess Margriet conducted the *Libelle* interview in 1977, Anna Terruwe attracted the interest of young women students at the Catholic University of Nijmegen, the town in which she practiced as a psychotherapist. To them she represented a learned professional, who lived an economically independent life and had a successful practice of her own. Furthermore, Terruwe intrigued them as a woman who not only demonstrated her expertise in books and public lectures, but who publicly challenged normative authorities such as the Roman Catholic Church.[2] Women students lacked life scripts characterized by autonomy and self-development, determined by choice and not by socio-cultural prescripts on the lives that women ought to lead. Terruwe attracted their attention because she had carved out a professional career for herself which ran counter to the patriarchal structures of her Church, which had rapidly lost its validity and prestige during the Seventies (Borgman & Monteiro, 2008).

Whether Terruwe viewed the course of her life and career as worthy of imitation by women in general, however, remains to be seen. If one looks more deeply into her life and work, one may in fact reach the opposite conclusion: Anna Terruwe considered herself an exception to the rule. Women should refrain from a career if they wanted to be happy and, just as importantly, make the ones for whom they were responsible happy as well. In her view, women were obliged to honor both commitments. Terruwe presented her view in a public lecture in 1953, which was published in 1954 in a small booklet entitled *A Woman's Work (in Dutch: De vrouw en haar werk)* (Terruwe, 1954). In a little over thirty pages, she discussed the downside of the new and increasing opportunities for professional development for young women in the post-war Netherlands. Her reasoning was based on Catholic teaching, specifically the social order which was defined as God-given. This belief strongly resonated in *A Woman's Work.*

In this booklet, Terruwe presents several cultural life scripts that outline socially and culturally shared representations of the lives that specific groups should lead in view of their gender, age and / or class. As a concept, cultural life scripts recently elicited the theoretical and empirical attention

of a group of cultural and social historians from Radboud University specializing in various forms of life course analysis (Boonstra, Bras & Derks, 2014).[3] For my research on Terruwe's biography, I too am particularly interested in the tensions between what Engelen terms 'life scripts and life realities' (Engelen, 2014). In this article I will explore such tensions on an individual, biographical level by examining how Anna Terruwe attempted to enforce religiously informed gender-specific scripts for women that she rejected as viable maps for her own life. As a psychotherapist, she looked at the intersection of cultural and religious norms on the one hand and the reality of daily life on the other. She added a new voice to the emerging debate on gender, sexuality and family life (Blom, 1993): that of a Catholic female expert in mental health care addressing fellow women.

As new as this voice may have been, the gist of her argument was very familiar and does not merely illustrate prevailing opinions on the gendered structures of society, but Terruwe's intention to uphold existing role patterns between women and men.

In this brief exploration of Anna Terruwe's life, I focus on the manner in which she dealt with tensions between the cultural life scripts for Catholic women and her personal ambitions. On this biographical level it is possible to investigate whether and how she assumed, adapted, internalized or rejected ideal-typical representations (Boonstra, Bras & Derks, 2014). I will argue that the specific historical and religious context largely determined her agency. She had to manage the particular dynamics between gender and religion that put a considerable strain on the socio-cultural norms concerning women's professional opportunities. Whereas she contributed to the enforcement of such norms, she remained an unmarried professional. This is not to say, however, that Terruwe disregarded the existing cultural scripts for Catholic women. She specifically drew on alternative scripts, some of which dated back to early Christianity. Catholic hagiography displayed a whole range of such scripts that existed along the ecclesiastically and socially approved options of marriage and motherhood, or convent life. Some of these other scripts met the approval of church authorities, others were merely condoned or actively opposed. Women were challenged to muster up their creativity in this respect as they were structurally subordinated to men in patriarchal societies. For them, religion did not simply or inevitably go hand in hand with subordination or repression (Derks, Halkes & Van Heijst, 1992; Van Heijst & Derks, 1994; Derks & Monteiro, 1996). This analysis of Anna Terruwe's biography reveals how she carved out an exceptional position for herself that

was anchored in the very same Catholic tradition as the life scripts accepted by society and Church that she upheld for fellow women.
In *A Woman's Work*, Terruwe explains that 'in this day and age' the education of girls and young women should 'also' be oriented towards the development of capacities that would enable them to take care of themselves if necessary (Terruwe, 1954). The word 'also' is key to her understanding of women's position and role in society in the mid Fifties. Although she was self-reliant, she considered this to be a necessary evil for women in general because independence would force them to cultivate a businesslike attitude, regarded as masculine, which was inevitably accompanied by psychological damage caused by going against their 'nature' (Terruwe, 1954).

GENDERED SCRIPTS FOR LIFE

Woman's nature predisposed her to devote her life and energy to others; God had in fact created woman to that end, as man's helper.[4] With references to Biblical passages, Terruwe (1954) uses the God-given natural order in order to clarify to her readership that the psychological make-up of women was quite different from that of men. Here, she approvingly cited the influential phenomenological analysis of 'the woman' recently published by the influential physician and psychologist Frits Buytendijk (1951). He, however, addressed social relations as a key factor that put the 'innate' female characteristics into perspective, whereas Terruwe considered and presented these relations as reflections of God's order and therefore inescapable. She clearly argued within the boundaries of Catholic moral teaching yet presented its tenets in terms of mental health. On that account, women were required to live according to the demands laid down for them in the divine order of Creation. Terruwe's argument gendered women's capacities and options in terms of the care they should give to those to whom they were devoted. In a similar vein she cautioned that women who aspired to a professional career should refrain from marriage, as they would undoubtedly fail in their marital duties of love and devotion towards their husbands. They would sell their children short and even risked damaging their mental health by failing to provide sufficient maternal loving care in their infancy (Terruwe, 1954).[5]

Apart from the emphasis on mental health as explanatory factor, Terruwe's argument seamlessly fits the prevailing opinion that married women should not be part of the (paid) labor force. They were charged

with the organization of family life, taking care of their husband and children. The family was the cornerstone of the bourgeois Christian society that the Netherlands essentially was. The Second World War, as well as the Cold War, enforced the gendered role patterns that were, for instance, disseminated consistently in popular women's magazines (Hülsken, 2010). Yet, historians agree that the culture and mentalities of the Fifties were also permeated by various tensions. Under the surface of the apparently unchanging political, social and ecclesiastical structures that had supported the post-war reconstruction of the Netherlands, discomfort and uneasiness concerning the state of things was fermenting (Righart & De Rooy, 1997). This heralded a mental and cultural farewell to tradition, as Luykx & Slot (1997) argued, which eventually became prominent in the Sixties. The double-faced character of the Fifties explains why Terruwe's brochure and her arguments against married women in the workforce was scarcely criticized by reviewers. Annie Romein-Verschoor, a historian by training and a feminist and Marxist by inclination, seems to have been the only one to severely criticize Terruwe's philosophical and theological argumentation revolving around God's order. In the social-democratic newspaper *Het Parool* she unerringly put her finger on the patriarchal and normative structures of Terruwe's argumentation and the (biblical) sources she used. To her mind, Terruwe was 'a very learned woman who sold old wives' tales' and she encouraged her female readers to resolutely dismiss this so-called scholarly woman's talk.[6]

In 1977, in the spacious library of the palace of Princess Margriet, Terruwe once again articulated her opinions about women and the relationship between their 'nature', social position and mental health, albeit in somewhat different terms (In 't Veld, 1977). Although women had insisted for nearly ten years on equality and equivalence as the leading principles of Dutch society, Terruwe's exposition revolved around innate differences between the sexes. As she contended that each human being needs another in order to live, Princess Margriet asked her whether men and women had different needs in this respect. Terruwe answered that men were more likely to rationalize what they experienced emotionally. This was not to say that men had greater intellect than women, she hastily added, and she explained that the main question should be whether being part of the workforce did women any good (In 't Veld, 1977). Whereas young women in the Seventies were intrigued by the various ways in which Anna Terruwe broke new ground, she clearly attempted to keep the members of her sex in their 'natural' place, firmly sticking to the line of argument she

had developed and published in the mid-Fifties. Interestingly enough, the religiously charged normative character of her argument remained underexposed and would have escaped most readers as they were not well acquainted with clerical usage and the philosophical and theological connotations of terms such as 'order'.

EXCEPTION TO THE RULE

A Woman's Work paid attention to unmarried women as well. Both nuns and women who remained unmarried (by choice or otherwise) needed to resign themselves to the 'natural order' as well. For nuns, this meant following and obeying Jesus Christ, to whom they had been joined as they entered the convent. They too should refrain from any professional ambitions with respect to the education or health care which they provided. Terruwe considered the life of women who did not marry and had no apparent vocation for convent life 'undoubtedly difficult' (Terruwe, 1954). She presented such a life as an ordeal, and identified these women as a high-risk group for developing neuroses, because they had to fend for themselves.

Whereas Anna Terruwe expressed fundamental doubts about women's mental capacity to lead their lives independently from the men they were supposed to follow and serve, it is difficult to assess whether she herself experienced such doubts. Her personal archive does not hold diaries or personal correspondence that could answer this question; as this archive bears the traces of several consecutive selections and re-arrangements of sources, it is possible that sources of a more personal nature were destroyed by Terruwe herself or on her instructions. It is telling that most personal details are excluded from the brief outline of her life composed and published in 1994 by a confidante, Octavia van Breemen (1924-2017) and authorized by Terruwe (Van Breemen, 1994). Her professional training, her practice and publications formed the cornerstones of this life, whereas its core was what Terruwe herself identified as 'her theory', specified as the theory of affirmation.

One could contend that she thereby authorized a public version of her life and career that she thought would meet the expectations of her intended audience (Bosch, 2012; Goffman, 1959). Her publications and lectures make it clear that those expectations were defined more by her professional practice and her theory than by the personal and professional

choices she had made during her life (Terruwe, 1972).[7] Vital for understanding her life would then be 'affirmation', described by Terruwe as a process through which people came to accept each other as they were, acknowledging their individuality as well as their fundamental inborn goodness. She considered this acknowledgment as the key to personal happiness.

Anna Terruwe became quite famous for her therapeutic maxim that affirmation allowed a person to be who he or she was and to become who he or she could not yet be, in his or her own time and fashion. Similar allusions to the connection between psychotherapy and the development of a potential self have been made by other psychiatrists (Carp, 1946). To this day, Terruwe's principle is quoted approvingly by health workers, but it also appeals to the so-called millennials who feel burdened by social and professional pressures, experience the stress of too much choice and seek mutual solidarity (Kramer, Westermann & Launspach, 2017). Terruwe was convinced that affirmation as a therapeutic principle could compensate for affective deficits acquired since early childhood, for example lack of parental love – which she, not surprisingly, associated specifically with the shortcomings of mothers. Such affective deficits formed the building blocks of the frustration neurosis, a diagnosis with which Terruwe contributed to the theory of neuroses. Personally she considered her theoretical work on this neurosis (first published in 1962, with no fewer than six, partly revised reprints before 1998) as the backbone of her scholarly work (Terruwe, 1962).[8] In it, she distanced herself from the principle of repression that supported the theoretical framework of Sigmund Freud's psychoanalysis. Unlike Freud, Terruwe turned her professional attention away from neuroses caused by repression to those caused by a deficit in affection or love, for which she mobilized affirmation as therapeutic principle.

With a few exceptions (Prick, 1973; Vekeman, 2004), neither the frustration neurosis nor the therapeutic principle of affirmation gained full recognition from Terruwe's professional peers. Her claim to this discovery is disputable, as early childhood and (the absence of) parental love generally represented a linchpin in psychological assessments of children's pedagogical or behavioral problems. For the purpose of this article, however, it is crucial to acknowledge the importance of the discovery for the occupational group of physicians as an integral part of their cultural life script. The status of doctor was and is closely entwined with the core business of saving lives. Doctors' professional training concentrates on the improvement of their competence to skillfully assess and address

life-threatening situations in particular. This requires the personal courage, decisiveness and self-assurance with which high-profile colleagues contribute to the improvements in their particular medical specialism. Their lives bear the stamp of such discoveries, reinforced by the impediments and challenges they met, as well as by the aura of the benefits for their patients (Heimlich, 2014; Helman, 2014; Marsh, 2014). Obstacles and trials can be easily recognized in the narrative that Anna Terruwe did share with a wider audience concerning herself as a mental health professional. What mostly required an explanation in this narrative, however, was her gender, because training to be a doctor, specializing in psychiatry and starting a practice of one's own did not constitute a culturally accepted course of life for women. This explains why Terruwe herself went to considerable trouble to emphasize that she did not choose this path, but rather that this path had chosen her.

Towards the end of her life, she explained obliquely that she considered her profession and career as a vocation from which there was no escaping.[9] Precisely what she meant was probably only clear to insiders. Yet, her complicated choice of words underlined that women were not to entertain professional ambitions. These could derive only from an ideal or order beyond their control. Documents in her personal archive reveal that, to her, this imperative was of a religious nature. She was convinced that she had received her insights about the neurotic effects of affective deficits and affirmation from God. As a psychiatrist, she considered herself an intermediary between her patients and God. She even drew an analogy between herself and Jesus Christ: both had been sent by God in order to disseminate His teachings among the faithful. This presumption seamlessly fit the position Anna Terruwe had chosen as a Catholic psychiatrist since the Fifties. Whereas her male Catholic colleagues restricted themselves to their professional training and expertise when dealing with their lay, clerical and religious patients, church authorities, or other parties, Terruwe chose a profile as professional health worker under the tutelage of her Church (Monteiro, 2018)

In the few extant texts with retrospective autobiographical observations, she ironed out issues or aspects that did not quite fit the profile of such a life according to God's will. What was omitted was the fact that she quit medical school just before her final exam at the beginning of 1937 (Driessen, 2007). On February 28, she entered a convent in Duivendrecht, a town near Amsterdam, home to the strict contemplative Capuchin branch of the Poor Clares that originated in France. The nuns committed

their entire lives to God's glory and the salvation of souls.[10] Anna Terruwe was 25 years of age when she answered 'l'appèl divine'. The nuns hoped that God would transform her into a saint.[11] What she herself hoped to find in this convent remains unclear. Her exam results indicate that her path through medical school had been a rather smooth one. It is uncertain whether she was confronted with the misogyny reported by other women students. Their capacities were called into question by some professors, whereas their professional ambitions were barely taken seriously (Van der Schaft, Koster & Van ´t Woud, 1988). Not all women students were weighed down with the implicit or explicit misogynist conduct of the teaching staff and other men with whom they were in daily contact (De Jong, 1998). Did such behavior burden Terruwe for lack of a clear professional perspective? These questions remain unanswered in the absence of sources that could clarify the circumstances of the unexpected revision of her life course. Probably by the end of 1936, Terruwe had decided that she would become a nun instead of a doctor.

She had only just entered the convent when she reached the decision to leave again in April 1937. According to rumor, her parents, Jo Terruwe (1885-1950) and Cato Terruwe-Korbmacher (1881-1969), had applied pressure. Before they were married in 1910, they signed a prenuptial agreement that stipulated that each of them would set aside money for the higher education of their children. Gender did not matter in this respect; both their son, Jo jr. (1913-1989), and their daughter, Anna, who was two years his senior, were intended to become academically trained professionals. Jo entered the seminary in order to become a priest, whereas Anna started medical school. It was in the convent, however, that she learned to understand herself and her professional ambitions in terms of a calling from a higher authority, God. She owed this to the spiritual guidance of the Mother Superior of the Duivendrecht convent, Mère Véronique de Jésus (1872-1963), the French nun with whom Terruwe kept in touch after she left the convent. A few of her letters that were preserved in Terruwe's personal archive testify to a shared understanding of their calling. They were called by Jesus, who had equipped them with the means and capacities to exercise 'un office de tout de charité' on His behalf. 'Vous êtes non seulement son humble servante, mais l'instrument dont Il se sert pour exercer "sa Charité" envers ses créatures (…)'.[12] Articulating both her ambitions and her capacities in religious terms enabled Terruwe to leave the convent, resume her education, and finish medical school by taking the final exam in November 1938.

This religious framing of a professional life and career as a doctor specifically served to counterbalance her gender as a problematic category. Phrased in the terms she would later use in *A Woman's Work*, one could say that she subordinated herself to male authority. By dedicating her life to God, she could devote herself to her profession and serve life as a doctor. Terruwe thus developed an alternative life script to those of marriage, convent life and an existence as an unmarried woman. This script came with the advantage that she herself was in charge of her life. The gist of this script was helping people. As a fully qualified practicing midwife, her mother, Cato Terruwe-Korbmacher, served as a shining example in this respect. As a midwife in a vast rural region in the province of Brabant, she held an influential position that required regular dealings with the mayor, the town doctor and the parish clergy. On her obituary card, her children remembered her as a wise and strong woman who took her profession and patients very seriously.[13] Although there is no way of knowing for certain, Cato's life may have been one of the main sources for her daughter Anna when she criticized married women who put their work over their husband and children in *A Woman's Work*. What we do know is that both Anna and Jo went to boarding school at the age of twelve. At home, during the holidays, it was probably the domestic servant that was most concerned about them.

Anna Terruwe took her final exam in November 1938 and subsequently decided to specialize. Although this seems an unusual choice, as most young doctors became general practitioners, this is where gender came into play as employment in general practice was limited for professionally trained female doctors. As wives of male colleagues they could function as the doctor's receptionist, being in charge the telephone, the appointments and the dispensary. By choosing a specialization, however, they could escape this fate. Apparently, Anna Terruwe initially concentrated on surgery. In the interview with Princess Margriet, she explained that she switched to psychiatry as she was not able to make an emotional connection with patients while setting a fracture or removing an appendix (In 't Veld, 1977). In September 1939, she started her training in psychiatry, followed by neurology in the summer of 1943. By August 1945, she could officially register as a psychiatrist and start her own practice.[14] Her choice to specialize as a psychiatrist was rooted in the 'deeply felt conviction' that only professionals of 'a Catholic orientation' were able to properly to cultivate the "frontiers of psychiatry".[15] Her personal calling to serve God and her fellow man in a professional capacity resonated in the shift from the

'hard' and also heroic specialization of surgery to the 'softer'domain of psychiatry that treated 'illnesses of the soul'. Terruwe's position as psychiatrist and psychotherapist did not go undisputed in the Catholic community. Her gender was definitely a factor in the investigation to which she was subjected by Church officials, as well as in the official warning that was issued in 1956 which implicitly identified her as a questionable practitioner. As I explained elsewhere, the religious nature of her professional vocation was a mostly well-kept secret, whereas Terruwe made no secret of her ambition to contribute to the salvation of souls as a mental health practitioner. In the view of the church officials involved this was an infringement upon male, clerical prerogatives that urgently needed correction (Monteiro, 2018).

PUSHING BACK FRONTIERS

The investigation of the lives of individuals reveals where and in what ways their life courses intersected with cultural life scripts. To what extent did individual women and men accept, internalize, adapt or ignore the ideals and the norms inherent in these scripts? Their response was determined by the intersection of the historical context and identity dimensions such as gender, age, ethnicity and class. These dynamics define the agency of individuals or specific groups, their ability and opportunities to act and react in response to the norms and ideals that were considered appropriate for them. In Anna Terruwe's case, biographical research seems to indicate that she affirmed the prevailing cultural life scripts for Catholic women in general but developed an alternative script for her personal life. I will argue that for both positions she could rely on the Catholic tradition.

In medical school, Terruwe made the acquaintance of a small group of academically trained professional single Catholic women who had formed an association. They called themselves De Sleutelbos, which translates into 'a bunch of keys'– a name that signified that they intended to form an alliance respecting the individuality of each member. These energetic and clearly religiously inspired women meant to offer each other moral, social and professional support. Well aware of their exemplary function, they invested time and energy in various activities for female students such as Anna Terruwe, during which they highlighted their religious motivation and social position as young female Catholic professionals. In brochures, they addressed the impact of their unmarried status on their position in

the job market, where they were bypassed by breadwinners who were by definition men. The economic crisis formed the backdrop to these interventions in debates on broader societal questions in the Interwar years (Derks, 2007).

Members of *De Sleutelbos* were keen on 'foremothers' (Aerts, 1981; Derks, Eijt, Grever & Monteiro, 1992). The secretary of the group, Eugenie Theissing, was a trained historian and had taken her doctoral degree with a dissertation on a group of religious women in the Dutch Republic. These so-called spiritual virgins fiercely supported the Catholic Church, which had been outlawed in the Dutch Republic since the end of the sixteenth century. They were neither nuns, nor simply unmarried women, as they chose to live in their own home under the supervision of a spiritual director who determined the strict rules to which they had to abide in order to combine an intensive regime of prayer and devotional practices with charitable activities and religious education. They served as inspiring examples to the members of *De Sleutelbos* as they did not derive their identity from marriage and motherhood. In cooperation with the priests who served as their spiritual directors and depended upon the financial means, capacity for work and religious fervor of the spiritual virgins, they carved out new life scripts that fostered and affirmed both the influence and the informal power that they exerted in the Catholic community (Theissing, 1935; Monteiro, 1996). Negotiation and mutual dependency determined the extent to which these women could develop their ambitions for an active religious life in the world, whereas the Church merely condoned a contemplative religious life for women behind convent walls (Schulte van Kessel, 1980; Monteiro, 1996). In lectures and personal contacts with Catholic female students, the members of *De Sleutelbos* articulated and stipulated the responsibility of female professionals in society.[16] Moreover, they themselves embodied new cultural life scripts as single female Catholic professionals who wanted to take up a clearly-defined position in society by joining their intellectual capacities with their religious fervor (Aerts, 1981; Derks, 2007).

Over the past three decades, much scholarly research has been devoted to questions of religious inspiration and the engagement of Catholic women in history. A recent overview discusses the creative life scripts with which religiously inspired women attempted to subvert the strict rules of Church, and society tried to hold their ambitions and commitment in check (Lux-Sterritt & Mangion, 2011). In this respect, Anna Terruwe's belief that her profession was a vocation that justified the breach of gender-

bound social, cultural and professional restrictions has a long history. This history clarifies that Catholicism represented a complex site of gender-related meanings and practices that confined women to marriage or convent life as culturally accepted life scripts, but also allowed for the development of alternative scripts based on vocation or dedication. The latter usually hinged around the paradox that women resigned themselves to gender-specific expectations and restraints by submitting and subordinating themselves to male authority, but that they overstepped such boundaries as well on account of their vocation or godly calling. The meaning of their faith was ambivalent as it reflected and enforced the social and cultural conventions that defined and confined women's place in society, but at the same time represented a rich repository of alternative scripts that allowed them to set aside these conventions by appealing to a higher authority (Monteiro, 2011; Stogdon, 2011).

Women who attempted to enter the 'hard' professions, such as that of physician, used similar argumentations that both honored and violated the gendered norms to which they were subjected. A telling example is that of the Italian pedagogue Maria Montessori (1870-1952). In the Netherlands, she became renowned for her teaching method that was adopted and applied on a large scale in Catholic primary education. Montessori was trained as a doctor but struggled with the positivist and objectifying approaches of this discipline that, to her mind, reduced patients to machines with malfunctioning parts and elevated physicians to detached, rational-minded and highly qualified mechanics. The historian Marjan Schwegman (1990) demonstrates in her biography of Montessori that she based decisive changes in her life, conceived as turning points, on the call of a higher power. Something or someone outside herself – Schwegman does not mention whether this could have been God for Montessori – guided her through life. To her, what she wanted fatefully coincided with what was expected of her by this higher power. To Montessori, giving in to this power did not mean that she simply yielded to it, as she experienced it rather as a transfer of power and thus felt empowered by it. According to Schwegman, Montessori felt chosen because she was called.

Schwegman argues that on account of her gender Montessori represented an exceptional member of her professional group, but that, simultaneously, the fact that she was a remarkable professional was consistently undermined by her gender. Discovering new occupational missions at turning points in her life helped Montessori to resolve this tension. The choice to dissociate herself from medicine and turn to pedagogy instead

as a professional field was preceded by a meeting with a mother and child. Their interaction made Montessori understand the meaning of loving distance as a pedagogic principle (Schwegman, 1990). This change in her professional path, in turn, allowed her to discard the demands of detachment, objectification and rationalization connected to the cultural construct of masculinity embedded in the medical occupation. Her pedagogy rested upon modern motherhood that combined gentleness and strength of mind, qualities which were culturally defined in opposition to each other as feminine and masculine. Montessori weaved them together into an amalgamation that Schwegman (1990) characterizes as virile and militant.

It is tempting to observe parallels between Montessori and Terruwe: both exchanged surgery for psychiatry and concentrated on a new niche. Terruwe concentrated her professional attention on the 'domain of human love' which she denoted as uncharted territory in psychiatry. She challenged Freudian interpretations that inevitably linked love with sexuality. It was her contention that a deficit of affection could cause neuroses, whereas the cure could be found in giving love – separated from sexual feelings or associations – to patients and teaching them to receive this love (Terruwe, 1967). Both women coped with the cultural codes of their time that impeded their professional ambitions – impediments that they both circumvented by devising a life script relying on a higher power that served as a source for their empowerment.

CONCLUSION

Although historians are rather reticent with respect to the application and further conceptual development of cultural life scripts, these offer a fruitful perspective for the analysis of the tension between lives as they were supposed to have been lived and lives as they in fact had been lived (Boonstra, Bras & Derks, 2014). The biography of the Catholic psychiatrist Anna Terruwe reveals a significant field of tension revolving around gender, profession and confession. Terruwe needed to balance and co-ordinate the culturally coded qualifications of the medical profession with the norms and expectations concerning women that were embedded in culture, society and church. Her personal faith and the Catholic tradition provided the repositories for her personal life script that made her an exception to the rule that women were principally men's helpers and should therefore devise their life courses accordingly. Terruwe fits into a long history of

Catholic women who were able to find and define areas of action for themselves within the patriarchal structures of church and society. She fashioned her personal and professional life after a calling, considering herself not to be called to convent life but to an existence as a Catholic psychiatrist commissioned by God to free Dutch Catholics from the dogmatic enforcement of the moral teachings through which part of the clergy tried to make the faithful toe the ecclesiastical line. At the same time, when the lives of women were concerned, she herself uncharitably followed moral teachings, veiled in terms of mental health.

Emboldened by what she considered her calling, she bent the rules for lay women in her Church, whereas in *A Woman's Work* she presented herself as her sister's keeper. This brochure was pervaded with ideas about women that dominated the social, cultural and mental frameworks of the Fifties. Terruwe also considered women to be the pillars upon which the family as the cornerstone of society rested, and as such women were the linchpin of the social order God desired of the faithful. At the same time, the emphatic tone of Terruwe's text reveals that there was a longing for change which she attempted to counter by reminding women of their place in society. Her opinions went largely unchallenged, except for some pithy Marxist-feminist criticism encouraging women readers to discard Terruwe's advice because of its inherently patriarchal tenor. Exposing and undermining patriarchal structures in general became the first item on the agenda of the second feminist wave that gained in strength by the end of the Sixties and during the Seventies. Remarkably Terruwe rose to fame in the same period, and the ambiguity of her opinions about women and men and their cultural life scripts seems hardly to have affected her image as a woman pioneer who had pushed back frontiers.

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3. With contributions by the editors, as well as by Theo Engelen, Angélique Janssens & Ben Pelzer, Jan Kok and Peter Rietbergen.
4. Genesis 2:18.
5. The argument she presented in 1954 only implicitly alluded to possible societal damage as a result of women's professional ambitions, an issue she would emphasize more clearly in later publications, e.g. (Terruwe, 1976).
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[8]

MARJET DERKS

The 'negro boxer' as contested cultural icon: 'negrophilia' and sport in pre-war Europe

INTRODUCTION

In 1915, Dutch impressionist Isaac Israëls intended to paint modern life in London: mannequins, shop assistants and dancing girls, just as he had been doing in Paris and Amsterdam. But in London sport too caught his eye, resulting in sketches and paintings of jockeys and boxers. Black boxers in particular held a specific fascination for Israëls, as is shown by his *Den neger-bokser*, the negro boxer. He painted it after having witnessed the Senegalese boxer Louis Mbarick Fall, better known by his nickname Battling Siki, taking part in boxing matches in London. The work shows Siki seated in the corner of the ring during a break between rounds. He, like the vaguely discernible spectators, is depicted in shades of brown (Blakely, 2001, p. 126; Schreuder & Kolfin, 2008, p. 309). '(…) a dark coloured man (…) like in a circus tent', a reviewer remarked, 'remarkable' and 'characteristic' (N.N., 1919). One year earlier, Jan Sluijters had completed his *Negerbokser*, featuring a black boxer wearing only yellow shorts, a subject that he began to paint in 1913 and repeated in 1920 (Veth, 1914). It was shown at the Olympic exhibition at the Amsterdam Stedelijk Museum in 1928, whilst Israëls' painting was one of the Dutch exhibits at the so-called Art Olympics that accompanied the Los Angeles Olympic Games in 1932 (Wolf, 1928).[1]

Israels' and Sluijters' fascination was by no means unique. It was shared by many other painters and artists throughout western Europe, who were among the first to identify the presence of blacks as a phenomenon in modern European culture. The number of black migrants increased from the turn of the century onwards and particularly during and after the First World War. They were either soldiers, sailors or clandestine stowaways in

search of a new idealized life – or, to put it differently, a new cultural life script (Boonstra, Bras & Derks, 2014).[2] Their coming had an equivocal cultural impact on white avant-garde artists, liberal intellectuals and the public. These created a new wave of what historians George Fredericson and Dienke Hondius call romantic racialism or fashionable exoticism. Fantasies of 'authentic' tribal vitality and intensity, contrasting with alleged post-war European fatigue, and an appealing otherness and exoticism, were projected upon black immigrants, constructing them as the modern primitive (Fredericson, 1987; Hondius, 2014). Other authors refer to this phenomenon as negrophilia, a fetishizing 'craze for things negro' (Archer Straw, 2000; Kagie, 2006; Sweeney, 2004).

The heart of this European fascination for blackness was Paris, but it echoed in other cities, including those in the Netherlands. Everywhere this negrophilia was strongly focused on black physicality and concentrated on two cultural domains: the jazz scene and sport. The alleged appeal of male jazz musicians was their energy, loose style and rhythm, while female semi-nude dancers like Josephine Baker were alluring as 'modernist primitives' because of their seemingly unabashed female sexuality (Schloesser, 2005, p. 377). However, the desires that their performances evoked were ambivalent. Conservative and religious moral panic around unleashing male desires and luring white girls into prostitution indicated the cultural impact and signaled an ambiguous cultural clash between tradition and modernity at the intersection of race, gender, and class (Berliner, 2002). Or, as Hondius phrases it, blacks were being regarded 'as a curiosity, a child, a stranger or a danger for society'.

While the jazz scene has been well researched (Derks, 1986; Evans, 2016; Kaal, 2006; Kagie, 2006; Knauer, 1994; Wouters, 1999), the contested allure of (all-male) black athletes in the pre-war period is less well known, despite the fact that, like other festivals and rituals, the public nature of sport signifies its symbolic and cultural significance. Through studies by Dutch journalist Rudie Kagie (2006) and dance and theatre historian Joost Groeneboer (2003), some life stories of Amsterdam boxers are known. Both authors emphasize the fact that Amsterdam was a cultural melting pot, where black migrants (of whom they identified a mere ten families) did stand out because of the color of their skin, but were also able to make a living. Discrimination allegedly did not really start until the era of mass migration from Suriname in the 1970s. Against this view, American researcher John Hoberman (1997) has typified sport as a contested racial terrain, where hegemonies can be both established and challenged or resisted.

This leads to the question of to what extent sport, and particularly boxing, contributed to the 'knowledge' that white Europeans formed about blacks in pre-war modernity, next to constructions that were based on the jazz and music scene. What was the pre-war appeal of black athletes in western Europe, particularly in the Netherlands, and what types of categories were constructed to identify them? These are the central questions of this article, in which I conceptualize sport as a contact zone. This term was developed by Marie Louise Pratt (1991) to describe and analyze spaces 'where disparate cultures move, clash and grapple with each other, often in high asymmetrical relations of dominance and subordination, like colonialism, slavery, or their aftermaths'. The coming of black people to Europe who engaged in sport can be seen as such an aftermath. Consequently, the sporting arena became a place of encounter that allowed various groups of people to meet, reaffirm, or perhaps even challenge mental images of ethnicity. In this article, I aim to give an impression of the way that black boxers, in particular, were represented. By focusing on the language that the media (sporting magazines, newspapers and fiction), managers, and the occasional white boxer (in their published memories) used to typify them, I distinguish how these representations circulated and, through a looping effect of media and published stories, became categories by which black men as such were 'made up' (Hall, 1997; Sparti, 2001). Last but not least, I question how black boxers changed sporting culture in itself, thereby looking at the status of boxing as a cultural practice that connected various sociocultural and transnational spheres.

A DIASPORA OF BLACK BOXERS

Why boxing? Looking at popular black athletes in pre-war western Europe, one can of course point at football players, since this sport became a mass attraction from the First World War onward. In fact, one of the greatest attractions of the Olympic Games in both Paris, 1924, and Amsterdam, 1928, was a black football player from Uruguay. Being the star player of the world's best team, José Leandro Andrade's reputation had preceded him. If Josephine Baker was the first black film star, Andrade – nicknamed 'the black miracle' – was the first black icon in football, and also the first in the Netherlands. The handful of other black players were popular local heroes, like South African Louis Davidson – 'Black Lowie' – of the Westzaanse Racing Club in Zaandam and the Congolese player

Constant 'Jimmy' Cremer who played for football club Willem II in Tilburg in the Netherlands (Kemmeren, 2012; Luitzen, 2010), but they paled in comparison to Andrade, who was an international star. No event during the Amsterdam Olympics created as much interest as the matches of the Uruguayan team that set a new standard for football. Thousands of fans spent the night in the open to get tickets (Hiddema, 2008). Andrade, always addressed as 'the negro', featured in newspaper articles, sport magazines and booklets (Spierings, 1930).[3]

Before Andrade, another well-known black athlete was the American cyclist Walter 'Major' Taylor who had become a professional at the age of eighteen, in 1896, and became world track champion in 1899. Unlike Andrade, Taylor encountered racial prejudice in the white-dominated sport of cycling. In the US, several competitors refused to ride against him. During his European tour in 1901, however, 'the flying negro' met with enthusiastic fans and reporters. In particular, his firm religious beliefs (which made him refuse to compete on Sundays) and his upright reputation were highlighted. In addition, human interest magazines reported on his interest in music and photography, showing him not just in his cycling gear but also as a man in a tailor-made suit, thus representing him as a 'civilized black'. Nevertheless, Taylor remained a curiosity and was regularly announced as 'a wondrous negro, straight from America'. However, journalist Henri Desgrange, initiator of the Tour de France, didn't like Taylor, whom he reproached for displaying 'acrobatic monkey tricks' (Boesman, 2008; 2015; Hogenkamp, 1932).

Taylor and Andrade were exceptions in their respective sports. The sport in which black athletes featured most during the pre-war years, on an international, national and local scale, was professional boxing. According to English sport historian Matthew Taylor (2013), boxers belonged to fluid global networks and were constantly on the move. Boxing was a sport and a profession built on traditions of geographical mobility that developed alongside the global circuits of the late nineteenth-century entertainment industry, and was constructed and consolidated by managers and entertainment entrepreneurs. It particularly became popular among the urban industrial proletariat. As a low threshold lower-class sport, based on loosely structured networks, professional boxing in particular attracted all types of social minorities who hoped to earn some money by either fighting or gambling: laborers, and Jewish migrants from Eastern Europe as well as black migrants or itinerants, the latter particularly from the US.

A significant number of travelling boxers were African-Americans – Taylor (2013) even refers to them as a 'diaspora of black boxers'. Among them were the so-called heavyweight 'colored quartet' of Joe Jeannette, Jack Johnson, Sam Langford and Sam McVea. Mc Vea and Jeannette fought a famous match of 45 rounds amidst a large roaring crowd in Paris (Senten, 1944). But boxing culture encompassed much more than the Anglophone world that Taylor researched. A substantial portion of black boxers touring in Europe came from colonial areas in Africa and the Caribbean. Heavyweight Paul Hams from Martinique, for instance, fought 54 official matches in six European countries between 1910 and 1932, including the Netherlands.[4]

Whatever their country of origin, black boxers attracted an audience. As an amusement to white European audiences, their racialized performances contributed to the popularity of boxing as a spectator sport. The match between French champion Georges Carpentier and the aforementioned Senegalese boxer Battling Siki in 1922 drew 60,000 viewers to the Paris Vélodrome Buffalo. By the end of the 1930s, highlights of the fight between German Max Schmeling and black American Joe Louis (in the New York Yankee stadium in 1938) were shown as a trailer in cinemas throughout Europe. Those who were able to receive German radio could follow a live report that was transmitted through one of the hundred news wires present (Hughes, 2018). But even unknown fighters drew Belgian, German, French and Dutch viewers to matches in Antwerp, Rotterdam, Cologne or Berlin, Paris, Strasbourg or Marseilles or Milan. Even smaller boxing matches attracted an audience; in his report on lower-class Amsterdam, Dutch physician Israël Querido (1931) noted the enormous popularity of boxing in the working-class Jordaan district.

Mediatization interacted with this popularity. Looking at Dutch newspapers and magazines, the first articles on black American boxers began to appear from the turn of the 20th century onward. As was the case with Taylor, in the US their sporting victories had kindled a racial discourse. Unlike white boxers, who were either typified as skilled, well-trained or – occasionally – hard hitters, black boxers were being portrayed as primal, dangerous, and unreliable fighting machines. Well-known white champions such as John Sullivan and Jim Jeffries initially refused to box against black opponents because it would hurt the sport's reputation when black boxers started to win titles which 'belonged to the white race' (Gems, 2017; Hietala, 2002). Initially, therefore, black boxers fought in a competition of their own. When Jack Johnson, nicknamed the Galveston Giant, be-

came world champion in 1908 after defeating the white Canadian boxer Tommy Burns in Sydney, this breaking of the color bar led to a bout of racial upheaval and a call for white opponents to teach him a lesson. The latter were being referred to as 'the white hope'. Johnson's reputation among African Americans as 'the New Negro' – proud, independent and assertive – contributed to his aura of transgressing borders and his categorization in the white press as the 'bad nigger' who embodied the notion of resistance at the highest level (Runstedtler, 2012, p. 11 & 235).

Jack Johnson's interracial heavyweight fight against Jim Jeffries in Reno in 1910 was an international media event that was covered in almost every European newspaper (Runstedtler, 2012). The European sport press was critical of overt American racism, but nevertheless expressed similar sentiments. Discussions of Johnson systematically included his arrogance, flamboyant lifestyle and lack of decorum next to his muscularity.[5] In addition, black boxers were generally seen as a species. Allegedly, they were remarkably muscular but also irrational punchers who were often unable to handle the fame that came with victory in the ring. '(…) they then become a nuisance and arrogant', the well-known Dutch sport magazine *Revue der Sporten* wrote.[6] The first black world champion lightweight boxer, Joe Gans, was typified as a hard hitter but not an intelligent boxer. A match that ended in his being knocked out was held to be proof of the fact that not all blacks had a hard skull (Aycock & Scott, 2008).[7] World champion Sam Langford was 'anything but a refined pugilist. The fellow is strong, fights like a tiger, bashes his opponent'.[8]

In his memoirs (translated into Dutch in 1922), French world champion Carpentier (1922) insinuated that the alleged verbal abuse aimed by Johnson at his opponents accounted for his success. Well-known Dutch sport journalist Leo Lauer called Johnson 'a non-gentleman' and 'the most hated black boxer that ever put on boxing gloves'.[9] In particular, the fact that he was married three times, always to white women, and had been immersed in controversies and even been imprisoned because of these relationships, grabbed attention. He was stereotyped as a sexually undisciplined black man who corrupted white young women into a similar state.[10] A black boxer entering a world that had formerly been a white man's prerogative could not end well, these articles seemed to say. In the 1930s, Joe Louis became the focal point of anti-black Nazi propaganda and was routinely reduced to 'der Neger' (the negro) against whom the 'super Aryan' Max Schmeling would put things in order (Hughes, 2018, pp. 200-201).

Thanks to abundant reporting, Dutch boxing fans were anxious to see a black boxer in the ring. This held especially for the lower-class boxing audiences that used to frequent matches (Kagie, 2006). The Dutch boxing scene was divided. Organized boxing had started with the Dutch Boxing Association (NBB), an elitist amateur association that aimed at displaying the 'noble art of self-defence' and was opposed to popular professional boxing because it involved prize money and was associated with the lower classes and disrepute. Due to agitation, brawling and corruption, professional boxing had been under elite suspicion for a number of years. The mayors of Amsterdam and several other cities even banned professional matches altogether after a suspicious death in 1921, although boxing for money continued in closed meetings. It added to the aura of illegality that surrounded professional boxing (Mol, 2000). In 1928 the boxing organization split, with the Dutch Boxing Union (NBU) becoming the union for professionals.

From the First World War onward, newspapers printed advertisements for boxing events that generally announced black boxers as a special attraction. These boxers came from Cuba, the US, Martinique (but living in France), England, or else they were Surinamese who were either with the Royal Netherlands East Indies Army (KNIL) or had migrated to the Netherlands. Sometimes the announcement was merely 'a negro boxer', as a category that spoke for itself and was used to attract an audience. These boxers were announced to be fighting against 'Europeans' or 'Dutch'.[11] The advertisements were placed by the operators of the local theatres or concert halls that hosted the matches, like Diligentia in The Hague, the Rotterdam Zoo hall and – before the prohibition – the Concertgebouw in Amsterdam.

These events attracted thousands of spectators; during the 1930s, important matches were sometimes filmed and shown in cinemas.[12] By then, even so-called Black and White boxing matches were held in The Hague, featuring two black boxers from England and two Dutchmen (who, since no further description was given, were white). 'It is a given fact that negro boxers embody a special enchantment (…), they always deliver sensational fights, as can be expected this evening as well', the otherwise quite reputable newspaper *Het Vaderland* (*The Fatherland*) announced.[13]

Nicknames for black boxers like 'the Belgian Terror' (for Surinamese boxer Joe Ralph, who often fought in Antwerp), the 'Black Panther of Rot-

terdam' or 'Tiger' Flowers underlined this mixture of sensation, exotic danger and boxing whenever black boxers were involved. Many were given the prefix 'battling' before their last name. Match organizers made sure that these names were mentioned on posters and in advertisements with the description 'negro champion' because it made the cash registers ring.

Not only theatre operators, but managers too, displayed commercial interests in black boxers. White entrepreneurs, mostly self-made men already working in the entertainment business as vaudeville directors or pub owners, heard opportunity knock and re-invented themselves as the managers of black boxers. Being a boxing manager incurred no professional costs and required no specific training. Their goal was to get as many bookings as possible. If that meant travelling throughout Europe, then that was what they did. As early as the inter-war years, professional boxing was an international sport. As said, American boxers came to Europe and European fighters travelled across the continent to earn a living.

On the one hand, these managers can be seen as cultural brokers, acting as intermediaries between the black boxers that they travelled with and tried to 'sell' to match organizers and the mostly white audiences that wanted to see them perform. As such, they represented a cultural contact zone par excellence. However, they were far from being neutral go-betweens. Again and again, they issued statements presenting the boxers as primal forces, pinch hitters, black masculine machines that challenged white men. Together with the epithets that theatre operators used to promote fights in advertisements, such descriptions were circulated by the media, particularly the popular sporting press.

BATTLING SIKI

The personification of the 'negro-boxer' in pre-war Netherlands was 'the French negro' Louis Mbarack Fall, better known as the aforementioned Battling Siki. He was famous for his rapid punches, his training methods and his remarkable stamina. Having boxed a total of thirteen matches in Amsterdam and Rotterdam, he was not just the subject of newspaper articles for the Dutch, but instead was a well-known black boxer of flesh and blood. Furthermore, he acted for a while as a trainer at the boxing club De Jonge Bokser (The Young Boxer) in Rotterdam, the home city of his common-law (white) wife Lijntje van Appeltere. This did not go down well with everyone. Mixed-race marriages were a sensitive issue in a pre-war con-

servative Dutch society that was based on class, confessional and racial hierarchies. Sexual self-discipline was seen as a marker of white decency. The transgressing of boundaries by entering into relationships that crossed the lines, either those of class or those of ethnicity, was looked down upon.

In addition, relationships or even marriages between black men and white women seemed to confirm negative prejudices of the former's hypersexuality and the latter's vulnerability or moral weakness (Laarman, 2013). Although there were exceptions, social pressure on mixed couples was never far away (Altena, 2013). These views were echoed by Belgian boxing manager Rik Senten, who acted as Siki's manager for a short while. He unabashedly reproached him for his 'not unlikable black brazennes' having 'picked a Dutch tulip', resulting in a 'little chocolate boy', referring to their son (Senten, 1944, pp. 42-49). Similar comments were made in newspapers in the Netherlands and also in the Dutch East Indies; there were also suggestions that Siki loved more than one white woman and did not treat them with respect.[14]

On the 24th of September in 1922 Siki beat the French light heavyweight world champion and decorated war hero Georges Carpentier in front of 60,000 astounded Frenchmen. Although the public honored Siki for being the better boxer, many newspapers and sporting magazines all over Europe presented the outcome not as Siki's victory but as Carpentier's defeat. Both implicit and overt ethnic remarks predominated and constituted a racial discourse. This became even more heated when rumors began to spread that Siki had been supposed to lose the fight, due to the agreements made between their managers. However, Siki had decided to fight back after Carpentier had hit him hard, contrary to the agreement. Match fixing was not unusual in boxing, but in this case it was not Carpentier but Siki who was blamed for cheating. The fact that Carpentier called him 'a monster' certainly helped.

After this fight, Siki was famous throughout Europe, but whenever he was mentioned, so too was the color of his skin and his alleged extravagance. This categorization even had political implications, when the British Home Office debated a planned fight between Siki ('the wild man of the boulevards') and the British boxer Joe Beckett. Eventually, it prohibited the match, stating that as a result of 'the introduction of the color question' (…) all sorts of passions are aroused'. This suggested that colored people in England might become agitated (Benson, 2006).[15] As such, this political intervention produced new meaning and significance regarding blacks in general and black boxers in particular.

Dutch newspapers were close Siki-watchers. Not only his fights (51 wins in the Netherlands, Belgium, France, Germany and Spain), but also his punching power, evoked fascination. His reputation spread to other media. In the novel that the aforementioned sport journalist Leo Lauer published in 1931 (tellingly titled *Het donkere leven – The dark life),* a young boxer at the start of his career is repulsed by Siki, 'In his sleep he saw the grinning face of the black. He heard his raw voice. He saw his rough hands, his enormous muscles, his coppery flesh. (…) He despised all black boxers. Those brownies were savages. Beasts. They didn't box, they fought like wild animals' (Lauer, 1931, p. 80).

Despite (or because of) such representations, Siki's matches and visits attracted large crowds, particularly in boxing-minded Rotterdam. In October 1922, after his victory over Carpentier, Siki was honored together with his wife and son by an open carriage tour across the town. Thousands of enthusiastic fans were there to cheer him, causing the police some consternation. The presidents of the Dutch Boxing Association and the Dutch Olympic Committee gave speeches.[16] The national and regional press reported on the tributes and illustrated their reports with photographs. No one could doubt Siki's popularity. Some newspapers and sport magazines were pejorative in their comments, however, and called him 'the bloodnigger', 'the decadent', 'a Senegalese nigger' (who had had the audacity to marry a Dutch girl), 'a black gladiator' and even 'a trained monkey'.[17]

The last of these was in fact an expression that his French manager, Charley Hellers, used to typify Siki. During a press dinner, he said that he had always hoped to find an intelligent gorilla and teach him how to box, and that this was what he had found in Siki (Runstedtler, 2012). This comment circulated throughout the Dutch sporting press. Carpentier, in contrast, was repeatedly referred to as 'the champion of the white race', thus represented boxing matches between white and black boxers as a fight between races, with the pecking order between these at stake.[18]

Perhaps even more than his boxing, Siki's alleged extravagant lifestyle (which was deemed inappropriate for a 'son of Cham'[19]), his public display of wealth and extravagance and unreliability, drew attention. Whether the allegations about his behavior were true or false, such qualities were not valued in pre-war Dutch society. Social democrats saw Siki as a modern gladiator who had become the prey of boxing managers who tried to make good money from his matches.[20] Confessional leaders perceived his popularity as a sign of sport-madness: 'If only someone has a fist! For the rest, one can be without a brain, a heart, morals, any higher ambition.'[21] Sport

magazine *Sport in Beeld* even stated that Siki's behavior was typical of all black people, since 'negroes can be strange fellows'.[22]

BLACK BOXERS FROM SURINAME

Although no one could match Siki's fame, a number of other black boxers also attracted the public gaze. The most well-known boxers were the aforementioned Joe Ralph, Harry 'Battling' Sparendam, Otto Sterman, Jimmy van der Lak, and Jules Vismale, all originally from Suriname or born to mixed marriages between migrants from the West Indies and Dutch women. Contrary to common belief, boxing was not a big sport in Suri-

name at the time. From the turn of the century onwards matches were held, but due to lack of organization, fights, and disputes over money, the colonial police refused to allow boxing matches (Stutgard, 1990). Surinamese men therefore mostly became boxers outside their own country.

In particular, in the welterweight (between 63.5 and 66.7 kg) Ralph raised popular expectations. He had come to Europe as a 18-year-old in 1920. Due to the fact that he had a Belgian manager, Ralph mainly boxed in Antwerp, the heart of Belgian boxing culture, but he also frequented Rotterdam and Frankfurt, and toured through England and Spain. Between 1926 and 1933, Ralph boxed 53 matches in seven European countries.[23] After having beaten Dutch champion Arie van Vliet, the Dutch sporting press appropriated him as 'the feared Dutch negro-boxer' and 'our own black champion'. He was lauded, not just for his boxing abilities, but also for his 'charming personality, a sportsmanlike guy, that knows his job'.[24] 'Despite his little black skin' he was a Dutch citizen, something to be proud of. With 'the black miracle' Ralph, Holland could have its own black champion, just like France, England and the US.[25] His great breakthrough, a match for the Dutch title against Van Vliet in the zoo in The Hague, never occurred, however, because his manager had allegedly raised the price, resulting in the match being cancelled. Some press commentators suggested that this was because he was afraid of a defeat, since Ralph had been out of form.[26]

This manager was the aforementioned Rik Senten, a Belgian sport journalist, pub owner and revue organizer from Antwerp who managed multiple Belgian and Dutch boxers during the 1920s and 1930s. Besides Ralph, Sparendam too was among his protégés (Senten, 1944). In his memoirs, published in 1943, Senten was quite outspoken about black

boxers. Joe Jeanette was 'the equivalent of Josephine Baker'; Paul Hams, the French heavyweight champion from Martinique, was proud, and his aggressive looks suggested that 'he wanted to defy the whole of the white race'. Joe Ralph did evoke his sympathy, because he was 'extraordinarily well adapted to the white world', particularly since he came 'from the far West Indian woods'. He was very well dressed and had excellent table manners, in contrast with many backwoods white boxers, Senten noted with some astonishment. Joe Ralph, who had 'a broad chest and powerful shoulders, with muscled arms, elegant small hips and slim sculptured legs', was less defiant, but was also a man that Senten did not really understand. On tour in Germany, they came to a Berlin dance-hall, where every girl wanted to dance with 'the negro' – a word that Ralph himself hated because he found it humiliating. Senten didn't understand this, but to appease him, whenever he read to Ralph the newspaper articles on his fights, he would substitute 'colored' for 'negro' (Senten, 1944).

BOXING IN THE DUTCH EAST INDIES

Another Surinamese boxer was the aforementioned Harry Alfred Sparendam. The last part of this article focuses on his life and career, both to show in greater detail how boxing changed cultural life scripts, but also because he represents an extra colonial element. Born in 1897 in Paramaribo as the son of a former slave, Sparendam joined the KNIL in 1916. This brought him first to the headquarters in the garrison town of Nijmegen (in the south-east of the Netherlands) to undergo training, and then to the Dutch East Indies, where the KNIL played an important role in colonial enforcement. There, he was part of a small segment of so-called 'westkleppen' (westcaps): Surinamese KNIL members. Within three years, Sparendam was promoted, first from soldier to corporal and then to sergeant.[27] Initially during military training in Nijmegen and then during his stay in Bandung, where he was encamped, Sparendam learned to box.

In the Dutch East Indies, boxing was a popular sport. In part this was because it was part of military culture, since the heads of the armed services considered boxing a good exercise and an appropriate display of military masculinity. Both the army and the navy held boxing matches and championships. As well as this, popular boxing involved boxers of all kinds of backgrounds. Going to matches was seen as an appropriate social activity for the male colonial administrators and KNIL members, as long

as these were well-organized. Male spectatorship produced a temporary and limited camaraderie in which white Europeans, black KNIL members and native Asians could participate. As such, boxing was a cultural practice that connected the Netherlands and its colonies in the Caribbean and the East Indies and created a multi-layered transnational community of fans (Sheehan, 2012).

Sparendam was part of this boxing-related camaraderie. He began to take part in boxing matches in the early 1920s as a welterweight. His first matches were in Bandung near where he was based, but after a few wins he was invited to various Javanese cities to fight against local champions (both Dutch and Javanese) and international ones from the Philippines and Shanghai. Around 1924, the first mentions of the 'excellent training' and successes of 'the sympathetic negro boxer Sparendam' began to appear in Indian newspapers.[28] Unlike in Europe, the term 'negro boxer' functioned as a means of inclusion and distinction in the Dutch-Indian boxing scene, which was characterized by multi-ethnicity. Ethnicity was never a disqualifying term in the newspaper articles. Rather, these focused on Sparendam's boxing qualities: endurance, resilience, and also fairness and a sympathetic attitude, 'a true practitioner of the noble art of self-defense'.

As such, Sparendam was typified as a model athlete by European standards. Furthermore, as a KNIL petty officer he was a guardian of Empire, while at the same time being part of the multi-ethnic boxing culture. This gave him a respected status and his own fandom. This became apparent when he and his family (Sparendam had married a white woman from Nijmegen; their two sons were born in the Dutch East Indies[29]) returned to the Netherlands for a six months' leave in 1928. Before his departure, he gave a boxing demonstration in the military club in Malang. This was reported in the press, and it was noted that '(…) many of his friends and sporting relations' were present.[30] During his leave in the Netherlands, he sent reports of his matches in and around Nijmegen and Cleve (Germany), which were published in Dutch-Indian papers so that the public could keep up with his progress.[31]

BATTLING SPARENDAM

At the beginning of the 1930s, Sparendam decided to prolong his career outside the KNIL. Perhaps he was influenced by the career change of his Surinamese colleague and fellow boxer Sam McGrosby. The latter had left

the KNIL to become a successful professional boxer in East Asia. Sparendam followed in his footsteps, but decided to do so in Nijmegen.

According to the local press, Sparendam had 'splendid recommendations from his former superiors' in his suitcase[32], but despite his professional past as a KNIL petty officer, it was the beginning of difficult times. He and his family had to live in with his wife's relatives. This was the beginning of a life of constantly moving from one relative to another. Between 1931 and 1938, they moved eleven times.[33] Nevertheless, Sparendam energetically started his new career. He placed an advertisement in a local newspaper announcing that a boxing school had been established by 'the well-known negro-boxer Sparendam'. He thus appropriated this stereotype to identify and promote himself in order to start off his career.[34] Supported by an encouraging local press, his club Door Oefening Sterk (Strong Through Practice) was able to attract a couple of dozen members within its first year of existence. Sparendam acted as trainer and gave lessons twice a week in a local pub.

Sparendam began to present himself – perhaps in reference to Siki – as 'Battling Sparendam' and tried to fight as many matches as possible. Since possibilities in Nijmegen were limited, he searched all over the country as well as in Belgium, Germany, and France, where he fought twelve official matches.[35] In France, he was announced as 'le noir Dancing Sparendam'.[36] He both won and lost his fights, but it turned out to be hard to make a living. In order to be able to fight in official matches that counted and would increase his prize money, he had to have his own manager, and this turned out to be a real difficulty. A string of more or less trustworthy managers crossed his path. Some were locals who boxed in Sparendam's boxing club but otherwise had no expertise. Others, like Senten, were more experienced but could not give proper support to his career because they had to divide their attention between too many other fighters (Senten, 1944; Hendricx, 2016).

When it turned out that, during his leave in 1928, Sparendam had boxed in Germany without an official boxing union permit, he was banned from the official competition.[37] Following this, he addressed the organization's annual conference and complained about his lack of opportunities for fighting in the Netherlands. He referred to his past as a petty officer in the colonial army, where he had been a respected man defending the nation's interests. Furthermore, he mentioned his family and widowed mother in Paramaribo, who depended on his support. Sparendam's plea, which lasted longer than was usual at such meetings, met an embarrassed silence and

was noted.[38] The ban was eventually lifted, but his search for a reliable manger continued.

In addition, racially condescending undertones also hampered Sparendam's career, as he experienced in Rotterdam. This was considered the Mecca of boxing in the Netherlands because the city did not have a bar on boxing. Great boxing tournaments were held in large theaters and the town contained numerous small boxing schools and cherished Olympic champion Bep van Klaveren and Olympian Huib Huizenaar as Rotterdam heroes. Theo Huizenaar, the latter's brother, was a successful boxing agent, who acted on Sparendam's behalf for a while and contracted him as a warm-up fighter before Van Klaveren's matches. This gave him the opportunity to fight in front of large audiences. The local newspaper *Rotterdamsch Nieuwsblad*, however, expressed a distinct dislike of Sparendam, who was typified as 'a pitch-black negro from the West Indies', 'a friendly little negro' and 'a peculiar fellow'. In particular, Sparendam's habit of not sitting down during intervals but of continuing to move his arms and legs was ridiculed by including a cartoon of a black dancer with boxing gloves in the report. At the same time, this obvious display of endurance caused astonishment.[39] Following this, an article on a match in 1933 devalued Sparendam's boxing technique, saying the 'the little black's boxing was quite meaningless'.[40] Due to such reports, an image lingered of a primal force with enormous stamina, but not a refined boxer. Compared to Joe Ralph and the quantity of other black boxers visiting the Netherlands, Sparendam failed to stand out enough.

In 1938 Harry Sparendam left Nijmegen and his family and moved to Breda, where he had managed to find a good agent who promised to get him into official NOB matches.[41] It was his last public notice. 1939 found him in The Hague, where he died on April 24, 1942, alone and from unknown causes. The death certificate said: 'occupation: none'.[42]

CONCLUSIONS

In his book *De eerste neger* (*The first negro*), based on interviews with first-generation immigrants from Suriname, mostly in Amsterdam, journalist Rudie Kagie (2006) suggests that these black men attracted a lot of positive attention in the pre-war Netherlands. Although their social position left much to be desired, they were admired, attracted numerous white women, and added to the glamor of the swinging twenties. Black musicians were

the most successful, but boxers shared in this reputation. According to Kagie, real discrimination did not start until the 1970s, when large immigrant groups from Suriname arrived in the Netherlands. This view is echoed in Joost Groeneboer's (2003) article on black boxers and actor Otto Sterman, also from Amsterdam.

The above analysis of boxing culture at large and the life histories of a few black boxers in particular, however, shows a more global, complex and ambiguous history. Conceptualized as a transnational contact zone, boxing provides an insight into popular cultural encounters and the making of multi-level meanings regarding dominance and subordination, both in western and southern Europe in general and in the Netherlands in particular. So-called 'negro-boxers', a container concept for all non-Whites, were a contested category. On the one hand, the sport offered participants from different backgrounds, ethnicities and social positions the possibility of earning money, sharing emotions and building (albeit temporary) comradeships based on shared masculinity. Black migrants or itinerants from the US and colonial areas also contributed to the popularity of boxing in Europe.

Simultaneously, black boxers were trapped in a colonial arrangement with white managers, theater operators, and the press. These created circuits of culture that both drew them in and pushed them into the status of second-rate people. Black boxers were identified as essentially physical and were made appealing for their muscularity, attractiveness, and extraordinary and exotic power. Often comparisons with animals (such as monkeys and tigers) were made, adding to the sense of primitivism. Cultural products such as advertisements, paintings, and novels added to this looping image and made black boxers, and even black men as such, into a category. At the same time, the boxers' professionalism, intelligence and pugilistic skills were often questioned, with the implication that such qualities were the prerogative of white boxers.

The ambiguity of allure and fear particularly came to the fore when black boxers married white women and defeated white champions. John Hoberman has typified the rise of such black athletes as the representation of a historic role reversal. White European pre-eminence included the presumption of physical as well as intellectual superiority over other races. Black boxers who were victorious, both in the ring and as sexual competitors, threatened to reverse this dominance, as the examples of Johnson, Siki and Sparendam show. To rebut this threat, 'negro boxers' were represented as fighting bodies, with their bodies being both the essence and the

limitation of black humanity and a sign of inferior status. If anything, the allure of negro boxing shows a superficial fascination with blacks as 'the other', as long as they did not try to transgress boundaries. As such, the highly transnational world of boxing has helped to preserve deep-seated myths about race, class, and gender.

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[9]

HARM KAAL

A friendly match: sport and political culture in the Netherlands between the 1950s and the 1970s

216 In the spring of 2018, Theo Engelen published his first novel aimed at an adult audience. In *Marathon* Theo, himself an avid long-distance runner, tells the story of a middle-aged man who runs his first marathon. While braving the elements the runner reflects on two major issues that define his life. As always, given a certain degree of overlap between the main character and the author, it is tempting to look for autobiographical elements in the novel, but I will resist the temptation (for one thing, the book was not yet available at the time of writing). What I will try to do, however, is to explore how, as Theo has done in his novel, sport has been used to tell stories, in my case within the sphere of politics.

To argue that sport and politics are closely connected is to state the obvious.[1] That said, very few historians have offered a critical reflection on the multifaceted nature of this connection, but the American sport historian Allen Guttmann (2003) is one of them. He identifies four basic perspectives. The first one concerns the role sports have played in fascist and communist regimes, for instance in terms of political propaganda. Sport emerges here as a domain where typically the young are trained for battle. Secondly, sport is political since it can have an exclusionary dimension along lines of class, race, gender and other axes of difference that limit the degree to which people can participate in sport. Thirdly, sport is intimately linked with international relations. Huge international sporting events, such as the Olympic Games, have turned into a competition between nations, while boycotts have drawn these events into the field of politics as well. Fourth and finally, Guttmann mentions a neo-Marxist approach that is aimed at outlining the capitalistic and therefore repressive dimensions of sports.

Guttmann (2003) acknowledges that his historiographic overview of

the connection between sport and politics is far from all-encompassing. One of the perspectives that is missing is an analysis of the role sport has played in the construction of communities of belonging, ranging from neighborhoods to the nation state and from social to political communities (Taylor, 2007; Pas, 2015). In the Netherlands, the focus of this contribution, sport clubs were an integral element of the closely-knit socio-political communities united around class and religion that defined Dutch society up until the 1960s. Much like political parties, trade unions, women's clubs, schools, and the print media, sport clubs played a key role in maintaining unity and ensured that children grew up in the safe environment of their 'own' milieu (Budel & Derks, 1990; Dona, 1981). Also missing from the overview is a consideration of the scholarship inspired by a cultural approach (Pas, 2015). In the words of sports historian Jeffrey Hill (2003, p.361), sport can be seen as 'a system of meaning through which we know the world'. In this contribution, I aim to illustrate this system. I will argue that sport acts as a semiotic reservoir, as a field that politicians across different political systems mine for discourses, symbols and signs that they can use to construct a particular persona and to convey particular political messages. In short, sport contains important political capital that politicians and other actors in the political sphere seek to use. Based on a Dutch case study, I will discuss how politicians from the late 1950s onward associated themselves with sport in various ways in an effort to win popular support. Against the background of increasing concerns among political parties over a growing divide between politicians and the people, politicians acknowledged that sport, and the platform of popular culture in general, offered them opportunities to (re)connect with the electorate – young people in particular – in new ways. At the same time, in terms of policy making, politicians embraced sports by integrating it in their political platform and by acknowledging the potential of sport to reach specific policy goals. By exploring the interaction between sport and politics from these angles, this contribution answers Paul Ward's appeal to mainstream historians to start 'playing' with sports (Ward, 2013).

POLITICS AND POPULAR CULTURE

Ward's appeal can justifiably be extended to include popular culture more generally. Over the past few years, historians interested in exploring changing notions of democracy, citizenship and political representation

in the postwar years have indeed increasingly viewed the interaction between the spheres of politics and popular culture as a relevant area of research. What started with normative accounts of the supposedly negative effects caused by the 'popularization' of politics has recently developed into a field of study dedicated to showing the political relevance of popular culture. Scholars in the field of cultural studies – and the odd historian – have convincingly argued that political and social historians need to take popular culture seriously.

Hill's approach to sport as a system of meaning also applies to popular culture: it provides an important framework in which people construct identities and experience and try to make sense of the world they live in (Classen, 2010; Nieland, 2004; Street, 1997; Van Zoonen, 2005). By paying attention to popular culture we are, according to Lawrence Black (2010, p. 3), putting 'politics in its wider social setting'. John Street (2004, p. 436) in turn has argued that we should approach the interaction between politics and a massified and pluralized popular culture as 'a legitimate part of the complex ways in which political representation functions in modern democracies'. Political representation in this case refers to the way in which claims to power and to act and speak on behalf of others are articulated (and contested) in the public sphere. The practices and discourses of popular culture form a significant part of the repertoire through which these representative claims were made. Representation, after all, is also a key element of the world of popular culture (Spitaler, 2005).

In *Fever Pitch*, Nick Hornby (2000) described the Arsenal players as 'our representatives, chosen by the manager rather than elected by us, but our representatives nonetheless' (Street, 2004, p. 447). Professional sports people and many other exponents of popular culture act as representatives of their fans, of people who identify with them often to a greater extent than they do with their political representatives. Scholars of cultural studies have argued that this has to do with an emotional divide between the world of politics and that of popular culture. While people experience a gap between themselves and their political representatives, the stars in the world of popular culture, in contrast, are perceived as accessible (Van Zoonen, 2005). Popular culture thus emerges as a communicative space in which politicians are making representative claims and in which political identities are constructed and articulated. Elements of communication that are typically associated with popular culture – looks, emotions, dress, body language, a focus on the private self – therefore need to be taken seriously as crucial elements of *political* communication as well (Street, 2004).

Although some historians have lately developed an interest in the interaction between politics and popular culture, scholars from the disciplines of cultural studies and media and communication science still dominate the field (but see Beers, 2013; Fielding, 2014). A historical approach is, however, needed to overcome the rather presentist bias of the existing body of literature, which locates the interaction between politics and popular culture in more recent decades. Moreover, historical research can improve our understanding of this interaction through contextualization, by linking it with the layout of the political and media landscape and dominant cultural and moral values (Randall, 2010; Street, Inthorn & Scott, 2012; Van Santen, 2012). Such an approach, I would argue, will improve our understanding of how politicians coped with four crucial and closely related criteria of political representation in these decades: visibility, simplicity, authenticity and emotionality (Coleman, 2011; Holtz-Bacha, 2001).

The French political scientist Bernard Manin (1997) has conceptualized the transformation of political representation in the 1960s and 1970s in parliamentary democracies as a shift from party to audience democracy. He pays particular attention to fundamental changes in the relationship between politicians and the media. Previously, thanks to close connections between political parties and journalists, the media had offered politicians a rather uncritical platform for political communication. In the 1960s this 'partisan logic' made way for a far more critical approach (Brants & Van Praag, 2006). The rise of television also allowed for new ways of political communication, bringing politicians straight into the living room of the electorate. It resulted in a personalization of electoral choice: voters did not so much support a political party, but once again first and foremost placed their trust in an individual politician. Parties turned into 'instruments in the service of [leaders]' who used media and public relations experts to improve their communication skills and commissioned opinion polls in an effort to tap into concerns on the minds of the electorate (Manin, 1997, p. 219-220). In the 1960s, politicians increasingly had to compete for visibility with other spheres of interest, such as watching an entertainment show on TV, going to the movies or reading a lifestyle or pop magazine. For politicians, entering the arena of popular culture – appearing in illustrated magazines, on TV shows, or rubbing shoulders with sports stars and other icons of popular culture – meant that they enhanced their visibility, particularly among groups of voters for whom politics was (perceived to be) a minor interest, such as young people and women (Classen, 2010; Coleman, 2011; Driessens, 2013).

As a consequence of this visibility, a politician's body became an important element of political communication as well. Popular culture is an arena where the body is cultivated: outward appearances and conceptions of beauty play a key role. This also emerges from the definition of sports as 'an ensemble of knowledges and practices that disciplines, conditions, reshapes, and inscribes the body' (Cole, 1994, p. 15). This prompts an investigation into political bodies in their literal sense as well – that is, the appearance and physique of politicians – and more generally, in connection with this the construction of manliness and femininity in politics and the gendered nature of political communication. George Mosse (1996), for instance, has argued that the postwar male stereotype was the athletic, clean-cut and physically fit man, a stereotype which the United States exported to Europe through politics, youth culture, and sports. This representation of masculinity turned into political capital in Europe from the 1960s onward, as I will show for the case of the Netherlands. Pierre Bourdieu (1998), in turn, has argued that sport serves as an arena for the expression of masculinity, because of its competitive nature (Spitaler, 2007; Bonde, 2009). This also emerges from the common association between sports and warfare (Burstyn, 1999; Whithead, 2007).

From the perspective of gender studies, politicians who associate themselves with particular male-dominated sports articulate the dominance of masculinity in politics. For instance, when politicians visit a football match, they are expressing their affinity with the common man and simultaneously are confirming the male-dominated nature of politics. Within gender studies, it has been argued that women are often excluded from such 'informal' spheres of politics, that is, from the arenas outside parliament where politics is also articulated (Spitaler, 2007). It was far less complicated for male politicians to develop a connection between their private and public selves and to display their authenticity. By engaging in sports, male politicians could display their 'private' side, show that they were in sync with the popular pleasures of large sections of the population, and tap into a rich reservoir of metaphorical language that enabled them to construct a link between their private and public or political persona. Female politicians, on the other hand, always ran the risk of having to justify how they combined their private roles as wife or mother with their public duties (Van Zoonen, 2006).

Popular culture was also employed by politicians to package politics in such a way that it became more easily to digest. Through the post-war rise of opinion polling, politicians learned that voters were lacking in know-

ledge of political agendas and that the number of floating voters was rapidly expanding (De Jong & Kaal, 2017; Manin, 1997). In the 1950s and 1960s, in many Western democracies, the linkages between class, religion and political identity formation loosened and political constituencies lost much of their communal nature. Against this background, popular culture – with its visual rather than textual orientation – provided the framework for a simplification of politics, for instance by putting the image of a political leader center stage. A focus on political personalities, on the 'individuality' of the politician, made politics less abstract, offered voters a new object of identification, and diverted attention away from the fact that differences between political parties were marginal (Manin, 1997).

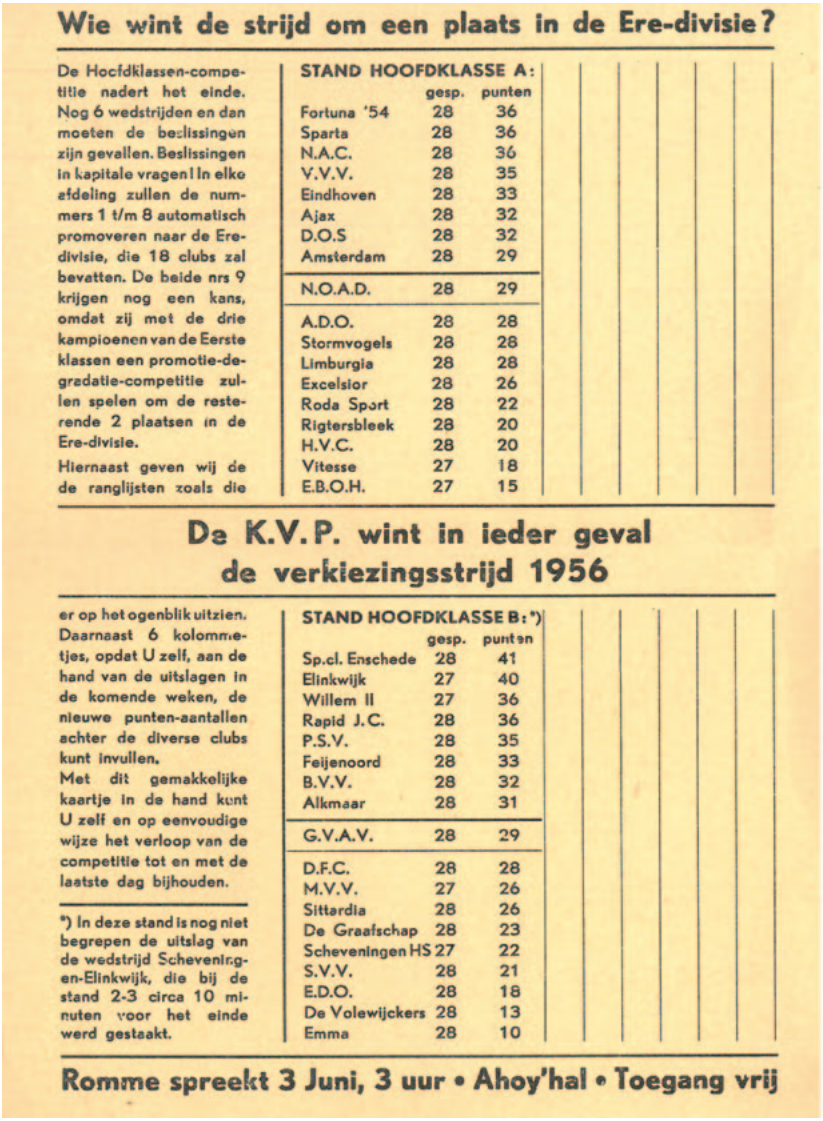
In addition to visibility and simplicity, authenticity and affective affinity, too, became vital assets for politicians (Beers, 2013; Brants & Voltmer, 2011; Holtz-Bacha, 2001; Street, 2004; Street, 2012). Earlier, political leaders had first and foremost aimed to present themselves as members – and leaders – of a particular constituency united around a shared identity and agenda, and as the sincere and serious defenders of their constituency's interests (Te Velde, 1999). Trust was built on presenting oneself as the embodiment of a particular political community and its political platform. With the demise of these communities, the trust that underpinned political representation became more personal in nature (Manin, 1997). Trust was based on the correspondence between a politician's public ('the politician') and private persona ('the person behind the politician'): authentic politicians were those who were 'representatives of themselves' (Coleman, 2011, p. 50). For politicians, however, being authentic was quite a challenge given the dominant perception of politics in the 1960s and beyond as being 'stage managed', secretive, divisive, old fashioned and static. The world of popular culture and its icons, on the other hand, was perceived as authentic, transparent, and unifying, and was associated with vitality and youthfulness (Spitaler, 2005). Against this background, the (discursive) practices of popular culture became an important stage for politicians to display their authenticity and to construct an affective relationship with the electorate by showing their private selves (Beers, 2013; Holtz-Bacha, 2001). Politicians were keen to create photo opportunities while they engaged in sports or visited a football match, and interviews with or portraits of politicians increasingly discussed their life outside politics, paying particular attention to their engagement in sports, other hobbies and their family life (Kaal, 2018). The next section offers a discussion of how Dutch politicians negotiated their interaction with the worlds of sports in the 1950s

and early 1960s by focusing both on the role professional sports people played in the political sphere and on politicians' participation in sport.

SPORT AND POLITICS IN THE 1950S AND EARLY 1960S

Dutch political culture in the 1950s centered around the values of hard work, restraint and trust in the ability of the democratically elected representatives to reconstruct the country after the war and work towards an affluent society (Kaal, 2018; Schuyt & Taverne, 2000). Both the mass media and the political elite increasingly identified this as a problem, because they felt that, slowly but surely, politicians and the people had drifted apart. The attendance rate at party meetings was in decline. Newspapers characterized the election campaigns of the 1950s as 'apathetic', 'dull', and 'tamed'.[2] Apparently, (party) politics had become technocratic and had lost its ability to unite voters around a shared sense of belonging (De Rooy, 2014). Politicians particularly worried about political ignorance and feelings of alienation among young people. Sociological research that presented young people as a problematic group with distinct political orientations – the German sociologist Helmut Schelsky (1957) labelled them as a 'skeptical generation' – prompted Dutch political parties to reflect on their approach to young voters (Goudsblom, 1959; Verwey-Jonker, 1960).

From the mid-1950s onward, major parties such as the social democratic *Partij van de Arbeid* (PVDA) and the Catholic *Katholieke Volkspartij* (KVP) made use of media and public relations experts in an attempt to enhance their appeal among the disengaged. The KVP was advised to send their politicians to sporting events or concerts in order to get in touch with the electorate.[3] In another attempt to reconnect with disengaged voters, the parties started to distribute election propaganda in which politics was associated with other spheres of interest that were supposedly more important in their minds. In the campaign for the general elections of 1956, the PVDA published a range of pamphlets in which party leader Willem Drees was compared with a few icons of popular culture, among whom were the Dutch football star Abe Lenstra and the popular American jazz artist Louis Armstrong. One of the pamphlets stressed that Lenstra and Drees had much in common: both were sensible people, team players, but also 'captains', in short: 'men a small country like ours needs'.[4] Both the PVDA and KVP also tapped into class-crossing male pleasures like the Dutch football league, which turned professional in the mid-1950s, in an



Wie wint de strijd om een plaats in de Ere-divisie?

De Hoofdklassen-competitie nadert het einde. Nog 6 wedstrijden en dan moeten de beslissingen zijn gevallen. Beslissingen in kapitale vragen! In elke afdeling zullen de nummers 1 t/m 8 automatisch promoveren naar de Ere-divisie, die 18 clubs zal bevatten. De beide nrs 9 krijgen nog een kans, omdat zij met de drie kampioenen van de Eerste klassen een promotie-degradatie-competitie zullen spelen om de resterende 2 plaatsen in de Ere-divisie.

Hiernaast geven wij de de ranglijsten zoals die

STAND HOOFDKLASSE A:

	gesp.	punten
Fortuna '54	28	36
Sparta	28	36
N.A.C.	28	36
V.V.V.	28	35
Eindhoven	28	33
Ajax	28	32
D.O.S	28	32
Amsterdam	28	29
N.O.A.D.	28	29
A.D.O.	28	28
Stormvogels	28	28
Limburgia	28	28
Excelsior	28	26
Roda Sport	28	22
Rigtersbleek	28	20
H.V.C.	28	20
Vitesse	27	18
E.B.O.H.	27	15

De K.V.P. wint in ieder geval de verkiezingsstrijd 1956

er op het ogenblik uitzien. Daarnaast 6 kolommetjes, opdat U zelf, aan de hand van de uitslagen in de komende weken, de nieuwe punten-aantallen achter de diverse clubs kunt invullen.

Met dit gemakkelijke kaartje in de hand kunt U zelf en op eenvoudige wijze het verloop van de competitie tot en met de laatste dag bijhouden.

*) In deze stand is nog niet begrepen de uitslag van de wedstrijd Scheveningen-Elinkwijk, die bij de stand 2-3 circa 10 minuten voor het einde werd gestaakt.

STAND HOOFDKLASSE B:*)

	gesp.	punten
Sp.cl. Enschede	28	41
Elinkwijk	27	40
Willem II	27	36
Rapid J.C.	28	36
P.S.V.	28	35
Feijenoord	28	33
B.V.V.	28	32
Alkmaar	28	31
G.V.A.V.	28	29
D.F.C.	28	28
M.V.V.	27	26
Sittardia	28	26
De Graafschap	28	23
Scheveningen HS	27	22
S.V.V.	28	21
E.D.O.	28	18
De Volewijckers	28	13
Emma	28	10

Romme spreekt 3 Juni, 3 uur • Ahoy'hal • Toegang vrij

Figure 1. Election propaganda cloaked in football talk. Source: Catholic Documentation Center (KDC), KVP Archive, inv.nr. 1488.

attempt to draw the attention of voters. In a pamphlet distributed in the 1956 general election, the PVDA combined information on a match between the teams of GVAV and Willem II with propaganda for PVDA party leader Willem Drees: 'even if you support GVAV, vote for Willem (of list number) II'.[5] Also in 1956, the KVP distributed a pamphlet that gave a preview of a friendly match between the Netherlands and Ireland and an

overview of the standings in the major Dutch football leagues. The headline read: 'Who will win the league? The KVP will definitely win the elections of 1956' (see Figure 1).[6]

One of the first Dutch politicians to cultivate a public image of himself in which sports played a significant role was the young Catholic MP Norbert Schmelzer. Schmelzer developed a keen interest in public relations and marketing in the mid-1950s and urged his party to use this expertise in the election campaigns. Schmelzer set an example by blurring the boundaries between public and private: he had himself filmed for television while he took a walk along the beach, while every newspaper interview discussed his love for judo and he was also often pictured in newspapers and magazines wearing his judo outfit. This all contributed to his image as a striking, talented and strong figure in Dutch politics. The novelty of this instrumentalization of sports for PR purposes is clear from the fact that Schmelzer's appearance triggered a discussion among journalists about the 'image building' of politicians. The English term was used to stress that image building was something foreign to Dutch politics and had been imported from the USA.[7]

Such a repertoire of political communication was also open to female politicians, as the example of the liberal MP Haya van Someren-Downer makes clear (Kaal, 2018). She entered parliament in 1959 and acted as chairwoman of the liberal party between 1969 and 1975. In a world of politics dominated by men and (to a far smaller extent) by women who either tried to go along with the dominant, masculine political culture or kept to the stereotypical female role in politics by focusing on 'soft' issues such as health and education, Van Someren stood out for her striking appearance. Haya – she was one of the first politicians to be commonly referred to by only her first name – was an eye-catching woman who knew how to use media attention to her own advantage. Her previous employer, the popular daily newspaper *De Telegraaf*, frequently published articles about Van Someren's public and private activities, including her exploits as a judoka.[8] Van Someren's eye for PR also included Parliament. After the famous Dutch judoka Anton Geesink had won the world title in 1961, becoming the first non-Japanese world champion, Van Someren urged the government to do more than merely send him a telegram and to pay Geesink the respect he deserved. Later on, she also made the case for more sports broadcasting on TV.[9] These examples show that even in the early 1960s, some politicians acknowledged the potential of sport to cultivate a particular image and to convey that they were in sync with the times.

SPORT AND POLITICS IN THE 1970S: THE RISE OF A CELEBRITY CULTURE

Throughout the 1960s and 1970s, the restraint that had characterized the emotional culture of Dutch politics in the early postwar decades gradually made way for a more expressive culture. The interaction between politics and popular culture played its part in bringing about this transformation. This interaction also contributed to the rise of a celebrity culture in politics, which operated in both directions: celebrities from the world of popular culture entered the political stage and politicians themselves turned into celebrities as well. The leaders of the three major parties: the social-democrat Joop den Uyl (PVDA), the Christian Democrat Dries van Agt and his successor Ruud Lubbers (CDA) and the leader of the liberal party Hans Wiegel, also known as 'Joop, Dries, Ruud and Hans', all to different extents knew how to navigate the popularization of politics.

In the 1970s almost all of the major parties followed the example set by Van Someren and recognized the potential of associating themselves with the victories of Dutch sport stars. In the 1960s and 1970s there was a lot to celebrate. In 1968, Jan Jansen won the Tour de France. Politicians eagerly issued press releases stating that they had sent out a congratulatory telegram, which in one case resulted in a dispute because an orthodox-Protestant politician had mailed his telegram on a Sunday.[10] In the early 1970s, football club Ajax won the European Cup three years in a row and the Dutch national football team reached the final of the World Cup in both 1974 and 1978 (losing both times). In 1974, the prime minister Den Uyl invited the players to a party in the grounds of his official residence. The public was treated to scenes that had been unimaginable before. Members of government were seen dancing and singing with the players (Van den Broek, 2002).[11] Apparently the codes of conduct had changed to such an extent that politicians felt free to behave like supporters.

This demonstrated that politicians were eager to tap into the popularity of sports. In election campaigns, parties competed for the most attractive time slots to broadcast their campaign commercials: the half-time break in football matches which would ensure them high viewer ratings. Moreover, in 1977 the parties made sure that the televised election debate would not be scheduled at the same time as an important football match on the other channel.[12] Sport stars also increasingly popped up in the election campaigns of the major parties. In 1981 a campaign strategist (and former journalist) described sports people as 'opinion leaders' and urged the so-

cial democrats to use them to appeal to particular voter groups such as young people and others that were perceived to be less interested in politics. One way to do so was by campaign commercials which showed sport highlights followed by short statements of sports people on their political preferences.[13]

In fact, this strategist was stating the obvious. All major parties already seemed aware that by associating themselves with sporting stars they could boost their party's image. In 1972 the social democrats campaigned with pamphlets in which famous Dutch actors, sports people and other celebrities expressed their support for the PVDA. Feyenoord star Willem van Hanegem was one of them. He himself had a working-class background and he played for a club in the port city of Rotterdam which had a strong working-class supporter base, making him a very credible standard bearer for the social democratic party. In other cases this was less obvious: the legendary sport journalist Theo Koomen made reference to famous Dutch footballing left-wingers in order to express his support for left-wing politics.[14] In the 1977 and 1981 election campaigns artists and sports people, among them Van Hanegem and his wife, decathlete Eef Kamerbeek and speed skater Jeen van den Berg, joined a campaign bus that travelled around the country. To attract people to campaign events, voters were invited to kick a ball with Van Hanegem.[15] Parties also repeatedly organized football matches between a team of politicians and a team of celebrities, which ensured them of plenty of media coverage (see Figure 2).[16] The social democrats, however, also reflected on the need to carefully balance entertainment and politics. Too much entertainment, they feared, would make it seem as if they were trivializing politics. Quotes from people like Van Hanegem in party propaganda therefore often contained references to specific elements of the party's political agenda that supposedly attracted them to the party.

A rather new phenomenon in the 1970s and 1980s was that of politicians who themselves actively engaged in sports. Against the background of the personalization of politics, sport harbored important values and attitudes with which politicians were eager to associate themselves, such as vitality, youthfulness and a winner's instinct. It also gave them the opportunity to display their private selves – the politician as a 'human being' – and to develop a link between their private and political personas.[17]

A fine example of a politician who used sport to build a particular image is Dries van Agt. In the 1970s Van Agt cultivated his love for cycling both by cycling himself and by mixing with the famous road racers of the

Figure 2. Politicians from the Christian Democratic Appeal party are about to play a match against a team of celebrities from the world of television and entertainment. The event was part of the 1981 general election campaign. Photographer: Marcel Antonisse, Nationaal Archief / Anefo, CC0.

day. Firstly, this enabled him to associate himself with success. Van Agt repeatedly appeared at cycling events, celebrating the victories of stars like Joop Zoetemelk (who won the Tour de France in 1980), Gerrie Knetemann and Jan Raas.[18] Secondly, since cyclists and their supporters predominantly had working-class backgrounds, his love for cycling enabled Van Agt to show that he was in sync with 'the man in the street'. Thirdly, cycling supplied a distinctive language and metaphorical landscape that allowed Van Agt and those commenting on his life as a politician to narrate his political activities in new ways. Van Agt himself compared the Tour de France with his own life as a politician, which had also been a 'track with lots of hills and mountains'. He drew parallels between himself as a politician and road racers by stressing his 'perseverance', and the need to be 'mentally' strong. In the media and in Parliament itself the Van Agt ministry was repeatedly referred to as the 'equipe Van Agt' with Van Agt riding in the yellow jersey, and his battle with his main adversary, social democratic leader Joop den Uyl was also discussed through the language of cycling.[19] Fourthly, by ap-

pearing at and participating in cycling events, Van Agt created plenty of photo opportunities, which ensured him coverage on the pages of a range of sports magazines and other popular publications.[20] In the 1970s Van Agt's cycling activities even turned into a mini-craze. Journalists published several books on Van Agt and cycling, among which was a comic book that represented his life as a cycling race (Bruijnesteijn, 1981). Although some journalists questioned the sincerity of his love for cycling, the road racers themselves showed their appreciation by endorsing Van Agt with campaign advertisements in which they characterized him as 'sympathetic, trustworthy and a "good sport"'.[21]

Other politicians followed Van Agt's example. In the early 1980s the new, young leader of the liberal party, Ed Nijpels, also cultivated an interest in cycling.[22] Jan Terlouw, leader of the socio-liberal party D'66, was pictured in popular magazines on his sailing boat or in his tennis outfit.[23] Ruud Lubbers, a young cabinet member in the 1970s and the successor to Van Agt as leader of the Christian Democrats in 1982, seized every opportunity to display his skills as a field hockey player and to draw parallels between these skills and his political talents: he once described himself as a man who worked hard and covered a lot of ground.[24] In 1989, Lubbers, who was about to enter his third term as prime minister, was still eager to display his fitness: on the day of the elections, the popular daily paper *De Telegraaf* published a picture of Lubbers jogging through the park on its front page, which suggested that he was still fit for the job.[25]

A LANGUAGE OF SPORTS

As the previous section has shown, politicians used sports metaphors to develop a link between their engagement in sport and their political activities. This was part of a larger trend in the 1960s and 1970s which saw the proliferation of the use of sport metaphors in political discourse. Metaphors are important in political communication because they allow us to understand an abstract entity in terms of another entity to which we can relate more easily. Structuring one domain in terms of another can influence the way in which large numbers of people conceive of sensitive and controversial aspects of the reality they live in. Sport metaphors are excellent examples of this. They have often been deconstructed as tools that are used to cloud judgement by reducing complex political issues to simple formulations, and in this way preventing the public from having a clear view of

the real issue at hand. The use of sport language in politics is, however, not just the result of a carefully planned populist strategy: it is also the expression of a new mentality. The German political historian Thomas Mergel (2002, p. 599) even sees it as a 'civilization' of politics since in earlier times warfare had played the role now played by sports in describing the world of politics. This makes it worthwhile to explore what impact sport metaphors have had on politics and on our understanding and reading of it.

One obvious aspect of sport metaphors is that they facilitate the understanding of politics as a battle between opposing sides. It is therefore not very surprising that they were increasingly used in the Netherlands from the 1960s onward, when a culture of postwar consensus in Dutch politics came to an end and was replaced by a politics of polarization. Within the PVDA, a younger generation of politicians urged for renewal and pushed the party toward a more confrontational stance. This new antagonism was aimed at forcing the three major confessional parties to give up their position in the political center and to join either the progressive or the conservative side in Parliament. When in 1973 the left-wing government of prime minister Joop den Uyl started its term, a social-democratic MP used a football metaphor to sketch the future. He characterized the government's four year term as a 'competition' in which the government would play several matches against its opponents.[26] Such metaphors in essence obscured the fact that in Dutch politics winning and losing was not really as straightforward as the language of sport might suggest: parties had no other option than to form coalition governments, and the party that had 'won' the elections did not necessarily end up in government.

Another key feature of the language of sports that was easily transferable to the world of politics was a discussion of the 'rules of the game'. Politicians and journalists often compared politics to a 'game' or 'match' that was guided by an established set of rules.[27] This metaphor was employed repeatedly because these rules became open for discussion from the late 1960s onwards. When the Amsterdam student movement occupied the head office of the University of Amsterdam in 1969, MPS discussed this in football terms as 'offside' and warned that parliamentary democracy would be in danger if people did not adhere to the rules. The 'offside' metaphor was indeed often used to argue that certain activities or arguments of political opponents were out of order.[28] As one might expect, the Speaker was often referred to in this context as the 'referee'.[29]

Sporting metaphors also emerged as a result of changes in the media landscape. In the 1960s it was not uncommon that reporters who had

made a name for themselves in the world of sports journalism made a crossover to politics. In doing so, they took the world of sports with them as a sphere of reference and a metaphorical landscape, as in the work of the famous Dutch journalist Nico Scheepmaker.[30] Simultaneously, from the late 1960s onward, sport was taken more and more seriously by established, well-regarded opinion magazines. Their reports on sport appeared side by side with pieces covering their traditional spheres of interest: politics and high culture.[31] Simultaneously, sporting metaphors began to appear in the political sections of magazines and newspapers.[32] This was also stimulated by the introduction of new formats, such as the televised election debates, which were narrated in the press in terms of a boxing, fencing or football match.[33]

Sport metaphors did not remain uncontested. They were also turned against politicians, for instance by labelling them as 'vedettes' – a concept with a double meaning that both referred to sports people as 'sport stars' as well as to people who 'behaved like a star', that is, whose behavior was too self-assured, and who were not open to criticism on their leadership and so perceived themselves to be 'unassailable'.[34] Framing politics in terms of sports was also criticized because it often placed voters in the position of a passive audience, rather than presenting them as engaged citizens who were supposed to play an active role in the political sphere themselves.[35]

THE INSTRUMENTALIZATION OF SPORT: SPORT AND POLICY-MAKING SINCE THE 1960S

This contribution has aimed to show how a focus on the interaction between sport and politics might improve our understanding of changes in political culture in the postwar years. Based on a case study of the Netherlands, I have discussed how sport and popular culture more generally acted as a platform and semiotic reservoir that politicians sought to use to present themselves to the people and gain popular support against the background of the emerging audience democracy in Western parliamentary democracies. This is of course only one element of the bigger history of the interplay between sport and politics. One other aspect that deserves more scholarly attention is the instrumentalization of sport in, and beyond, the field of policy making and I would like to end this contribution by briefly making the case for historical research on this topic.

WEG MET DE BUIKJES
EN DE SLAPPE SPIEREN

Alle experts zijn het erover eens, en de nuchtere feiten wijzen het uit: wij zijn een bewegingsarm volk, we eten te veel, nemen er te veel ons gemak van, we zitten te veel en gebruiken onze spieren te weinig. Vandaar ontstellend veel slapgespierde rekruten, akelig veel dikke buikjes, beangstigend veel hartinfarcten. Daar moet iets aan gedaan worden. Telekleur wekt alle lezers op tot een massale gezondheidsactie, daarbij gesteund door niet alleen de Nederlandse Sportfederatie, maar vooral ook door het goede voorbeeld van onze ministers en staatssecretarissen die de daad bij het woord hebben gevoegd en u voorgaan in uw goede voornemen. Telekleur roep u toe: Doe als zij — ga iedere dag even lopen, fietsen, zwemmen, het geeft niet wát ... maar DOE IETS AAN UW CONDITIE!

Foto voorpagina (evenals alle overige foto's bij deze reportage gemaakt door onze fotograaf Ruud van der Linden): minister Luns houdt in het zwembad zijn conditie op peil.

Figure 3. In a special section of the popular daily newspaper De Telegraaf, members of the Dutch government call upon the Dutch people to engage in sports in order to improve their health, 18 August 1969.

The instrumentalization of sport refers to the ways in which people have used the field of sport to attain specific goals in other spheres of life. From the 1960s onward, sport turned into a policy area of the Dutch national government. Against the background of rising levels of affluence and the advent of a post-industrial society, which led to an increasing number of people in sedentary occupations, sport became linked up with welfare policy. Recreational sport was instrumental to offering citizens a healthy, communal and useful form of leisure (see Figure 3). This recreational approach to sport remained dominant throughout the 1970s. In the 1980s, the instrumentalization of sport by the national government moved into the direction of social cohesion. Sport served to stimulate the integration

into society of minority groups, ranging from people with a disability to the elderly. Policy making also started to touch upon the field of elite sport. Government-sponsored grant schemes contributed the development of elite sport in the Netherlands, which was also boosted by the emergence of commercial sponsors and broadcasters. In the 1990, sport became connected to a growing range of policy areas, from development aid to environmental policy.

Over the decades policy makers have projected onto the field of sport their hopes and dreams for a healthy, more inclusive and participatory society, often treating sport as the panacea for a broad range of social ills (Van Bottenburg, 2002). This issue is at the heart of sport sociology and, in the context of the Netherlands, has been discussed in depth by Ramon Spaaij (2014; 2015), and Maarten van Bottenburg et al. (2015). They have shown that mechanisms of exclusion are also at play in the field of sport through a range of discourses and practices that side-line people along lines of class, religion, race, gender and ability, among others. After all, treating sport as a sphere for the creation of a sense of belonging and the construction of identities necessarily means that 'out-groups' are constructed as well: not everybody feels at home in the field of sports. However, we still need to know more about changes and shifts in the instrumentalization of sport throughout the postwar years. What were the hopes, dreams, and visions that were projected onto the field of sport, and how did these develop in the second half of the century? How, by whom, and to what ends has sport been instrumentalized, and what were the consequences in terms of the inclusion or exclusion of particular groups of people and the construction and maintenance of social hierarchies? Such research could serve to question ahistorical, stable definitions of 'sport' and 'politics' and their mutual relationship and should therefore place the power struggle over the definition and boundaries of the field of sport and its interaction with other fields at the heart of the investigation. It is up to historians to take up the gauntlet.

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[10]

REMCO ENSEL

Photography, race and nationalism in the Netherlands

At a time when Dutch neo-nationalism is simultaneously celebrated and intensively debated, it is worth remembering how, for the last two centuries, the sense of a national community has been shaped by embodying its national essence. In the most literal sense, biological terminology and racial ideas have been prominent conceptual tools in this endeavor. Beginning around 1800, the Dutch fascination with the national body corresponded to an international trend of "a biopolitics of the human race" (Foucault, 2003, p. 243). Biologists, doctors, physical anthropologists and anatomists, occupied with the tasks of discovering hitherto unknown peoples and equipping and staking out the new field of human science, explicitly considered it their duty to supply state and nation with embodied identities. Race research, which after 1800 would bring together several sciences and which became part of a process of scientization, precise measurement, and the calculation of measurement results via statistical processing, became closely involved in the identity politics of nationalism.

This chapter deals with the application of photography to the study of the Dutch in all their physical manifestations. The process of visualizing the authentically ethnic Dutch belonged to an international trend. Thus, just after the invention of photography, physical anthropologists in Europe and the United States employed the camera as a tool of recording and research in the study of human types (Banta & Hinsley, 1986). The sizes and characteristics of the national body, its proper posture, color, and physiognomy, could be communicated most convincingly to the reader or spectator by means of an image (Tagg, 1999). The photographs could be taken while on an expedition, on the occasion of the then-popular world exhibitions, in the photographic studio, or in the laboratory. Whether they were professionals on assignment or self-taught amateurs, photographers

spread across the world, which was rapidly being subjected to colonial rule (Hight & Simpson, 2002). Until at least the time of World War II, the use of photography as a tool for this type of anthropometric research was uncontested. There was, however, more variation and debate than is usually assumed. In the thirties, the process of capturing the Dutch did not only follow the well-known anthropometric visual technique with corresponding apparatus; just as common was a photographic style in which mind and body could be captured together. In both instances the expert's eye was assigned a special role because *"das Bandmaß sieht nichts"* (the tape measure sees nothing), as the well-known German physical anthropologist Ernst Kretschmer aphoristically put it (Prickett, 2008, p. 119).

In this chapter, I will discuss the meaning and stylistic conventions of photography in the discourse on Dutchness on the basis of the publication of the two best-known books on folklore, which appeared in the late 1930s. *Volk van Nederland* [*People of the Netherlands*] (1937) was conceived and edited by Jan de Vries, Germanist and chair of the International Association for European Ethnology and Folklore. *The Dutch Folk Characters* [*De Nederlandse Volkskarakters*] (1938) was co-edited by P. J. (Piet) Meertens, chair of the Dialect and Folklore Bureau of the Royal Academy of Sciences, and Anne de Vries (not related to Jan de Vries), a popular writer of regional novels. Both volumes were produced with an eye to both scientific merit and popular sales. Photography increased the attractiveness of the books but could also be used as evidence for statements about race, body shape and national character.

These two books appeared during the interwar period, at a time when, after a phase of state centralization, infrastructural integration, political democratization and economic change, a lingering uncertainty about the state of the nation had gained momentum. Widely held concerns translated into debates about the physical and moral condition of the Dutch population, its fertility, size and age stratification. Degeneration, Malthusianism and eugenics were the key concepts of interwar biopower (Kok & Van Bavel, 2010). The Netherlands already had a history of censuses and demographic research as part of the drive towards mapping and managing society. Nationality was introduced as one of the categories of the 1889 census in order to grasp the patterns of migration (Van Zeijl & Lucassen, 2001). In his overview of the demographic history of the Netherlands, Theo Engelen (2009) argues that knowledge of the composition and the general features of the population leads to a better understanding of historical processes. This contribution (and in the last section I will return

to Engelen's authoritative overview) may be construed as an incentive to situate demography as a system of knowledge production in its proper historical context. In the 1930s, concerns and debates did not only center around the quantity or the composition of the population, but also its 'quality'. A parade of pundits and scientists expressed their fears for the disappearance of the "true nature" of the Dutch people under the pressure of modernization, urbanization, globalization and individualization (Van Ginkel, 1999). Folk scholars acquired a special responsibility for salvaging what was left of true Dutchness in the most material and embodied sense. Photographers ventured out to investigate and put on record the indissoluble bond between people and region, if not "blood and soil" (Ensel, 2013). This case study shows how concepts of an embodied national identity were not limited to a specific visual genre or scientific domain, but came about in a wide range of practices of observation, measurement and dialogue.[1]

As my point of departure I will use an intriguing conflict concerning the authenticity of folk portraits at the inception of one of the aforementioned books on folklore. This will lead into a discussion on race research in the Netherlands and the role of photography. Next, I will draw a comparison between two photographic traditions, one semiotic and one geometric, the latter of which is the better documented. I conclude by positioning the photographic search for the 'true Dutchman' in the ongoing debate about race, biological determinism and nationalism in the Netherlands.

TO READ OR TO MEASURE

At the end of the 1930s, two voluminous and sumptuously illustrated books appeared in quick succession, which dealt with the appearance and temperament of the Dutch population. Portraits of authentic and autochthonous Dutchmen – the term "autochthonous" being used by one of the photographers involved – featured prominently in both collections. *The Dutch Folk Characters* (De Vries & Meertens, 1938) consists of characterizations of thirty-one regional ethnic types of the Netherlands and Flanders, each description accompanied by two portrait photos of an authentic, representative man and woman from the area. The essays' style combined elements of folklore studies (from Meertens) and regional literature (from regional novelist de Vries). Willem van Malsen's photography was characteristic of folkloristic documentary photography, and

complemented the slightly impressionistic tenor of the texts. A year earlier, *People of the Netherlands* (De Vries, 1937) had appeared. This work was also folkloristic in nature, but much more informed by the scientific inclinations of editor Jan de Vries; in any event, it displayed more variation in the style of its portrait photography than its successor would. Included in the volume were portraits by photographer Hans Gilberg, which share similarities with Van Malsen's photography. The most distinguishing aspect of *People of the Netherlands* was its inclusion of anthropometric photography in illustrating the chapters on the Dutch race and the Dutch national character. Racial science was not prominently featured in *The Dutch Folk Characters.* In *People of the Netherlands*, however, scholar of Germanic language and literature Jan de Vries and theologian-pedagogue Jan Waterink (1937) took explicit positions in the debate on Dutch racial characteristics. I am concerned here with the similarities and differences between the photographs of Dutch people included in the two collections, since both books cover, as it were, the entire spectrum of biological readings of portrait photography.

An extremely popular author of regional novels on Drenthe – *Bartje*, his greatest success, had appeared the previous year – Anne de Vries had proposed the idea of a collection of Dutch regional characters to the folklorist Meertens. The two had already collaborated on the *Greater Dutch Farmer's Book* [*Groot-Nederlands Boerenboek*] (1936) which represented country life through literature and portrait photography. This combination of literature and photography was a frequently employed theme in photo books. For the new volume, the editors opted for non-fiction, while retaining the same type of photography used in the *Farmer's Book*. Hans Gilberg had supplied the photography for the earlier project, and had, moreover, proved himself as a photographic portraitist of farmers in *Disappearing People* [*Verdwijnend Volk*] (1935), a collection of essays on the decline of country life by Roel Houwink, at the time a well-known author.

Gilberg was of German extraction, living in Zeist near Utrecht. Through his wife's participation in poetry circles, Gilberg became friends with Houwink and involved in photo books through the publisher Callenbach, for whom he would produce four books in three years. For instance, he supplied illustrations for the aforementioned *Greater Dutch Farmer's Book*. Anne de Vries had also lived in Zeist, and would resettle there later on. Therefore, it was only logical that Gilberg's name came up in discussions on Meertens' and De Vries' new project. The latter, however, had doubts about Gilberg's suitability for the job because of a serious incident which

had occurred after the publication of the *Farmer's Book*, and about which De Vries only informed Meertens at that point. The incident is indicative of the difference of opinion regarding the purpose to be served by photography within the collection.

Shortly after the publication of the *Greater Dutch Farmer's Book,* Gilberg confessed to Anne de Vries that he had misled the editors about the origin of the photographs. One photo illustrating the province of Groningen was, according to the photographer, actually taken near Bunnik, which was almost 200 km to the south of Groningen and only 5 km from Gilberg's hometown. According to its caption, another Gilberg photo, which had been included in *People of the Netherlands*, depicted a farmer from the Graafschap, in the eastern part of the country [p. 242]. In a letter to Meertens, though, De Vries commented that Gilberg had "assured him [a year ago] that it was also taken in Bunnik. I know that for sure since I bought the photo from him and framed it."[2] Meertens reacted with displeasure to De Vries's bad news, but went on to remark that he himself had assessed the photo as well:

> What you write to me about Gilberg has affected me painfully: it indicates a very suspicious lack of awareness of what we were about in making the *Farmer's Book*. Coincidentally, the night before I received your letter, one of my housemates wanted to know whether I could recognize the photos from *People of the Netherlands*. When I had a look, I recognized the farmer from the Graafschap as a Utrecht farmer, and felt defeated. I cannot imagine how Waterink [one of the authors of *People of the Netherlands,* RE], who is a Saxon himself, fell for that. I cannot quite grasp the matter; for instance, I do not understand what induced Gilberg to commit this fraud, and what made him confess his deceit to you.[3]

Meertens informed Jan Waterink of Gilberg's "deceit" ("there is no better word to describe it"). As with Meertens, the matter of the falsely labeled photos did not cause Waterink to doubt his own expertise in distinguishing regional or racial types in images. As Meertens wrote to Anne de Vries, Waterink had informed him that "it was not serious that the photo, image 16, appeared with the wrong caption, since he extensively measured it and acquired confirmation that this farmer from Bunnik was of pure Saxon type and could just as easily have lived in the Graafschap."[4] This reaction is very similar to Meertens' response to the situation, invoking the ex-

Photo 1. Hans Gilberg, 'Farmer from De Graafschap', included in Disappearing People [Verdwijnend Volk] (1935). Ed. Roel Houwink; also included in People of the Netherlands [Volk van Nederland] Ed. Jan de Vries (1937).

tremely coincidental anecdote about the "defeat" which could retrospectively be explained as a victory.

Meertens' and Waterink's reactions are telling. Neither admits to having been wrong; instead, each clings to a self-declared scientific expertise – not certified according to any recognized qualification – in interpreting the pictures. Each also makes use of a different technique when assessing the photographic image with his "scientific eye". While Meertens "read" the photos and thus attributed meaning to them – a semiotics of the body –, Waterink used a ruler to measure the photographic model – a geometry of the body. The question now becomes not only whether "a real Dutch person" actually exists, and if so, what he or she looks like, but also how we – or rather they – are able to confirm that existence.

Meertens and Waterink both, in their own ways, thought that they could determine the level of indigenousness of the individuals represented in the portraits included in their illustrated books. Each reached back to traditions of knowledge – folklore, psychology and physical anthropology – to which statements on the embodied nation were central.

The roots of the study of folklore lay in the nineteenth century. After World War I, the folkloristic paradigm began its advance in the academic world. Meertens owed his job as chair of the Dialect and Folklore Bureau of the Royal Academy of Sciences to the increased acceptance of this paradigm. The attention paid to folklore was part of a widely supported project to re-evaluate the national community in the years after World War I. "Nostalgic nationalism" (Van Ginkel, 1999) became a quest for the Dutch *Heimat*, the indigenousness of the Dutch body and the Dutch mind (cf. Ensel, 2014).

Both Meertens' and Waterink's careers show that folklore was a terrain whose disciplinary demarcations were still not clearly defined. Trained as a Reformed theologian, Waterink was a self-taught pedagogue in a new field, who produced publications about, and was granted a chair in, the discipline, and who subsequently branched out as expert in "folk psychology". This expansion of his interests brought him into the field of racial research, the core of which was centered in physical anthropology. This discipline of the study of the human body was a nineteenth-century invention, which gained fresh popularity during the interwar period. In physical anthropology, "race" rather than "people" was the starting point from which the search for the embodied nation advanced. Around the turn of the century, the autonomous discipline of psychology also gained visibility. It acquired the status of an academic science, and, by means of

concepts such as "folk character" and "folk psychology", played its part in the debate about the embodied nation. The quest for the embodied Dutch nation during the century and a half that preceded the publication of the two competing folkloristic collections discussed here had deep connections to these three knowledge traditions.

RACE RESEARCH IN THE NETHERLANDS

At the end of the eighteenth century, a kernel of embodied Dutchness was already present in one of the earliest systematic studies on national characters, by Willem Anthonij Ockerse (1788-1797). Ockerse derives his initial characterization of the Dutch from Humoral Pathology, the popular age-old knowledge tradition that combined medical science and psychology. The bodily fluids particular to the Dutch – partly due to the prevalence of water in the region – were thought to explain the "phlegmatic" national temper. In this ingenious way, the body's inner fluids, the inner self of the "national temper", and the exterior body were interpreted according to soil and climate. Notwithstanding the rise of the biological paradigm courtesy of Charles Darwin and others, Humorism continued to function as a means of describing the embodiment of region and nation until well into the twentieth century (Kloek & Mijnhardt, 2004, p. 207-208).

Ockerse characterized "the race of the Dutch people" as having a distinctive "muscle and bone structure, ... excellently curved coronal bones, strong airily arched brows, softly opened eyes, stretched cheek muscles, long and narrow jaws, manly protruding nose and chin..." Ockerse's quest for the embodied nation was directed at the autochthonous Dutchman, untainted by Frenchification, the "native" with the "fair, light-brown hair and blue eyes". It was in these people, not the elite, that the indigenous character (which could "be subdued, but never destroyed") was found, a character that could only be gleaned from "visiting every region of a nation, and observing the countryman in all his regional variants". Over the next 130 years, physical anthropologists and folklorists would answer Ockerse's summons to travel the nation in search of authentic Dutch ordinary people.

The Dutch fascination, around 1800, with the national body – the internationally renowned physiologist and anatomist Petrus Camper comes to mind – was in line with an international trend. The contemporary biologist Linnaeus classified each continent's human population according to

hair type and eye color. He also smuggled Humorism into his classification model. In this way, each continent was assigned one of the four available humors: America (choleric), Europe (sanguine), Asia (melancholic) and Africa (phlegmatic). He was lucky that Australia had not yet been recognized as a continent! His colleague, Johann Friedrich Blumenbach, went one step further. He categorized "national skulls", as they were called in Dutch literature. Famously, the biologist thought that, with a single skull from the isle of Marken, just north of Amsterdam (his collection contained eight "Dutch" skulls), he had identified the primeval Dutch Batavian (Roodenburg, 2002). This name denotes one of the ancient tribes who lived in the area during the time of the Romans and who, from the seventeenth century onwards, were honored as the forefathers of the Dutch.

The growing fascination with the measurement of the human body was part of the process of scientization that was the goal of many nineteenth-century disciplines of knowledge. "Scientization" refers to the process by which the human sciences, including the discipline of race research, are practiced according to the standards prevailing within the positivist sciences. In addition to the development of proper tools and vocabulary for the human sciences, precise measurement and the calculation of measurement results via statistical processing were characteristic of such scientization. It was not any single measured result, but the average of all results, which became the basis upon which conclusions could be drawn about national skull types (Dettelbach, 1997). While, initially, general pronouncements were made on the basis of a few available skulls, the idea spread among physical anthropologists that the measurement of large (living) populations, such as students, military recruits or prisoners of war, via statistical processing could yield a standardized means of reaching well-founded general conclusions on race classification.

In the second half of the 1860s, the factor of race was introduced into statistical population research within the Netherlands. Doctors conducted research into the biological specificity of the Netherlands' inhabitants, initially on the basis of skull collections, and later by studying living people (Bork-Feltkamp, 1938). Chromometry, the measurement and classification of people on the basis of skin, eye, and hair color, and anthropometry were usually combined (Maxwell, 1999).

Doctor August Sasse, author of *Principles of Folklore Studies* [*Beginselen der Volkskunde*] (1870), was probably the first person in the Netherlands to take the measurements of living people, and he encouraged others to follow suit. Sasse's research was linked to similar research being carried

out in the colonies. His son, Johan Sasse, conducted research on Marken, Terschelling (Sasse, 1913; 1914) and Urk (Sasse, 1911), while Doctor Arend Folmer did the same in Frisia (Duijvendak, 2003) and J. H. F. Kohlbrugge on Marken and in Volendam (Sysling, 2013). Sasse furthermore conducted anthropometric research in a Sephardic retirement home.[5] From his unlisted archive at the Leiden University Library it appears that Johan Sasse used separate file cards to register the individuated anthropometric data which he then tried to process statistically The single file card was one of the innovative paper technologies of the late 19th century (Bultman & Mak, forthcoming). At Terschelling Sasse took pictures of the people he had measured, but he was also in possession of a collection of skulls, perhaps inherited from his father, each of which was photographed. In addition, Johan Sasse collected so-called *cartes de visite* of the residents of the province of Zeeland. Overall, this resulted in a collection of very dissimilar photographic types.

After having located the beginnings of the Dutch population in the Roman era – cf. Blumenbach's Batavian skull – historians and race researchers moved forward in time. According to race researchers, the Netherlands was inhabited by the offspring of the Frisians in the north and the Saxons in the east, complemented by the Franks, who arrived later, in the south. This triad was based on a conception of the nation's emergence in the early Middle Ages, and was largely founded on textual sources; after 1850, this proposed arrangement constituted the standard perspective on the Netherlands' early population history (Beyen, 2000). In the early twentieth century, the triad of Frisians, Franks and Saxons remained popular, but faced competition from a theory of two races based on the "discovery" of a Dutch pre-history (as demonstrated by the presence of dolmens in the east of the country) and linked to the fields of craniometry and archaeology (Eickhoff, 2003). According to this theory, the Dutch population could be divided into a long-headed (*dolichocephalic*) Nordic race and a broad-headed (*brachycephalic*) southern "Alpine" race. This theory was based on an older theory, popular in international circles, which dealt with the classification of European peoples and can, for instance, be found in Sasse, Sr.'s publications. Sasse Jr, disproved the thesis that the people of Urk constituted the primal Dutch community. For his survey, Sasse spent five months on the island to take measurements from 450 people: "I thought I would find a really short-headed [i.e. brachycephalic] tribe locked up on this island, but that does not appear to be the case..." (Sasse, 1911). Sasse presented his pictures of Urker men and women at a conference in that same year. His research met with criticism, but his pictures were a great

success. As a form of recognition, his photographs of Terschelling or '*Hollandsche typen*', were shown at a conference in 1917, one year after his death.[6]

If we retrace our steps back to the two folklore books and to Gilberg's "photographic deceit", we notice that Waterink still referred to the once prevailing division between Frisians, Franks and Saxons: "He extensively measured it and acquired confirmation that this farmer from Bunnik was of pure Saxon type and could just as easily have lived in the Graafschap." This remark is striking for several reasons. First, the ethnonym "Saxon" was primarily a historical term, used to refer to a people close to the eastern Dutch-German border. In his contribution to the book *People of the Netherlands,* Waterink interpreted the term characterologically: the Saxon "knows the pressure of life... He is introverted..." The Saxons "bottle up their emotions...", etc. (Waterink, 1937). Now he suddenly pulled a racial interpretation out of his hat by using his ruler to take the Saxon's measurements. In his contribution on the character of the people, he made reference to such a move: "Juxtapose the picture of a purely Frisian type... and that of a Saxon..." without actually presenting any measurement. In the book, geometry was largely neglected in favor of a semiotic characterological explanation: "In this face, you see a man who dares to speak up…"; similar impressionistic phraseology follows. We may conclude that Waterink's measurements, as well as his expert status, may have come under criticism, but that the art of measuring portraits itself was not prone to such critique.

PORTRAIT OF A RACE

Scientists accepted the value of anthropometry, but they also acknowledged several types of photograph as source material. Jan de Vries and his fellow scientists could fall back on an eighty-year-old international practice of using photos to study humanity in all its physical manifestations. For anthropometric photography, models were ideally captured at the photographer's eye level, both in profile and facing the front. The photos were usually printed next to each other to facilitate comparison. This kind of photography constituted a part of the selection used in *People of the Netherlands* [p. 248-249]. Due to the fact that collectors of representative photos of the races "ha[d] experienced the greatest difficulty in comparing the measurements of individuals by some common standard", armchair scholars tried to standardize the work of these photographers by issuing directives for standardization (Lamprey, 1869-1870), in particular for the

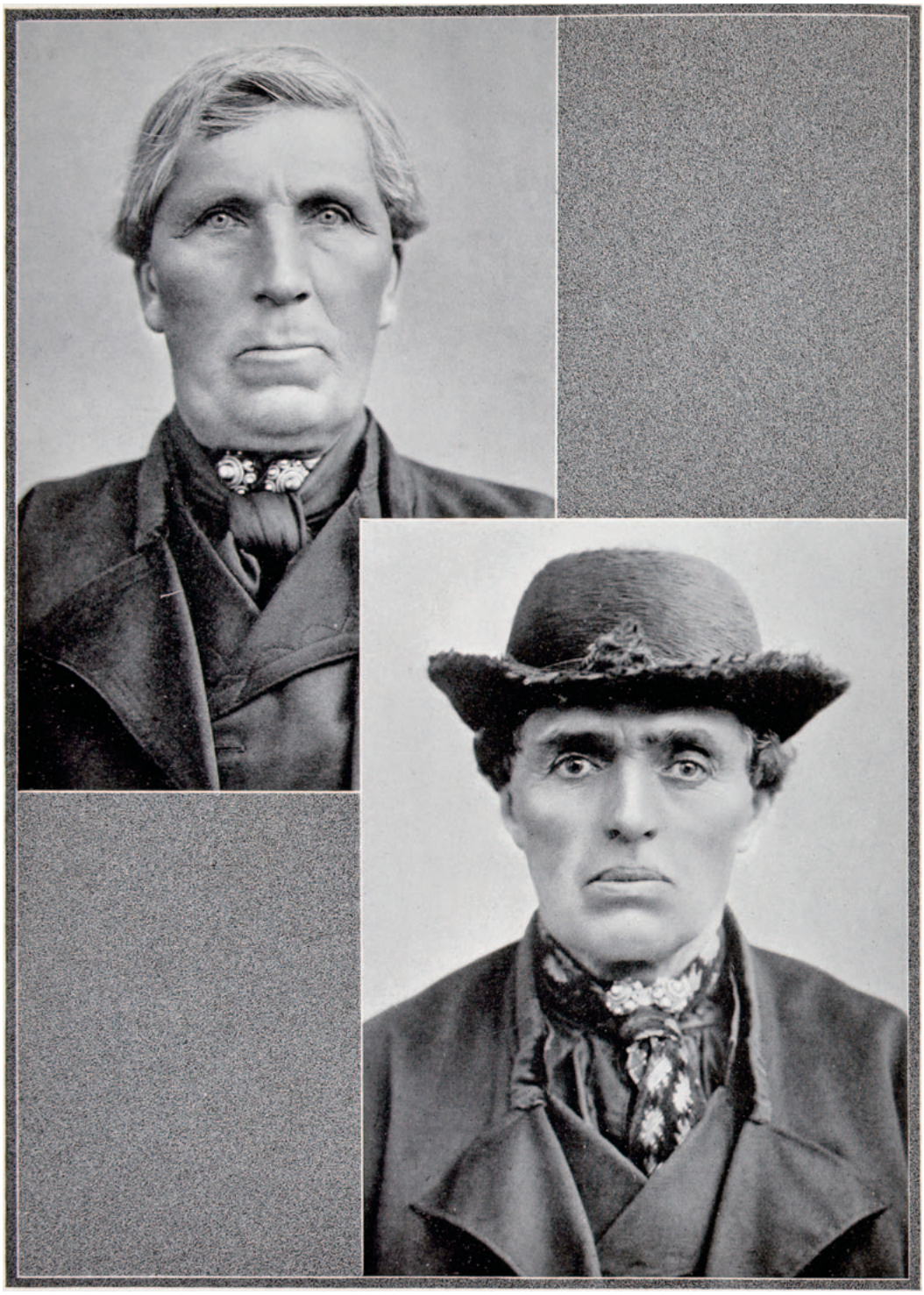
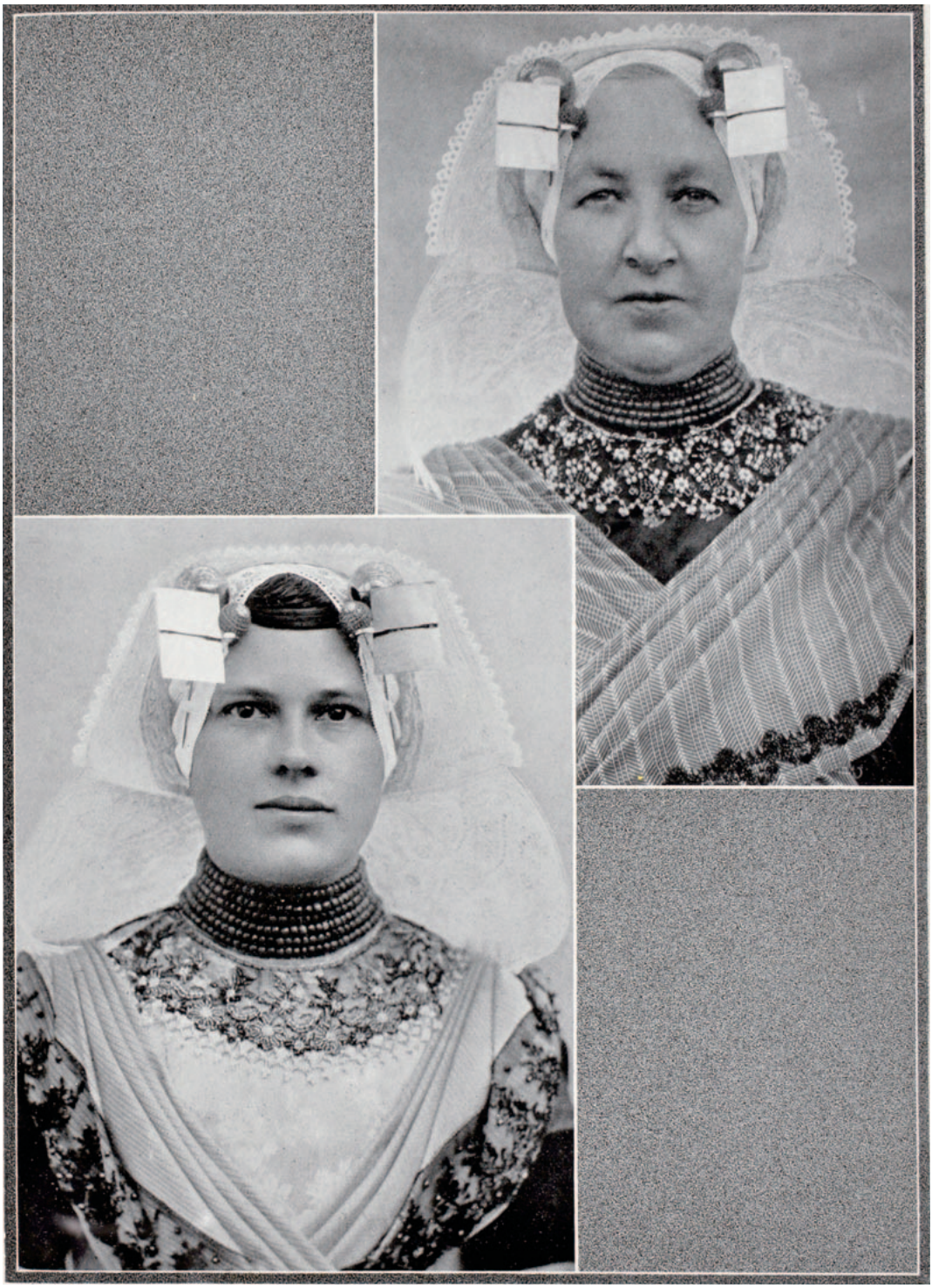


Photo 2. A geometry of the body: Page from People of the Netherlands [Volk van Nederland] Ed. Jan de Vries (1937). Photographers unknown.



measurement of the head. In Germany, the Swiss Rudolf Martin expressed his concern about prevailing photographic practice. Martin's work was known in the Netherlands, where manuals were also written for collectors of ethnographica. The "itinerant photographer" was supplied with specific instructions concerning camera, glass plate and photographic paper, as well as aperture and shutter time ("it is better to have them pose for too long a time rather than too briefly") (Martin, 1928, II, p. 28). These strict directives were part of the effort to subject race research to the demands of accurate measurement and statistical processes and to comply with the standards of positivistic science. In France – the land of scientific giants such as Georges Cuvier and Paul Broca – the Bertillons (father and sons) were the trailblazers of anthropometric photography (Hecht, 2003). After World War I, race science became an academic discipline which gave less space to amateurs, yet the professionals built on the achievements of the fin-de-siècle doctors and dilettantes.

Let me once again return to the case of photographic "deceit". Waterink pulled out his ruler to mask his own disgrace and Gilberg's deceit. He used a photo by Gilberg, which, according to the standards of the time, was not intended for use as an anthropometric source. There were clear directives as to how a subject for anthropometry should be photographed. Waterink's desperate move shows the extent to which the act of attributing meaning to a photo can take on its own life. In other words, it can be separated from the intentions of the photographer, and from the photograph itself as a materially and sensorily observable object. Gilberg's photos could be employed in a racial discourse of which neither photographer nor model was aware when the photo was made. Racial photography was one tool used in shaping the embodied nation. The national portrait gallery could also be filled with *Heimat* portraits.

HEIMAT PORTRAITS

In the spring of 1937, photographer Willem van Malsen was sent on a mission paying 750 guilders to capture the "autochthonous inhabitants" of the Netherlands. Like a latter-day Noah in search of passengers for his ark, he had to journey to the corners of the "Greater Netherlands" to take portraits of "persons originating in the region where they live, and whose ancestry has been rooted in that place from time immemorial". Based on a list, supplied by one of his clients, of the Netherlands' regions, Van Malsen was

Photo 3. A semiotics of the body: Willem van Malsen, 'Frisian Farmer' included in The Dutch Folk Characters [De Nederlandse Volkskarakters] (1938). Eds. Anne de Vries and P.J. Meertens (1938) (Nederlands Foto Archief).

to deliver "a pair of photos... one of a man and one of a woman" for each region. "My assignment was therefore purely documentary" (Van Malsen, 1938). In fact, it was much more than that. It was about who has a right to be present and be part of the national community and who is in principle ready to be rejected (Foucault, 2003, p. 256). This becomes clear from a revealing sentence in a letter from De Vries to Meertens after they had encountered some editorial issues: 'What do you think, shall we skip the Jews altogether? Do they actually deserve a place in a book on the *Dutch* peoples' characters?' Meertens convinced his co-editor to retain a chapter on the Jews.[7] The texts on the "regional types" regularly referenced "race" and "miscegenation", even if race was not an explicit topic of discussion [p. 251].

Van Malsen had come into the picture after the relationship between
252 the first choice, Hans Gilberg, and novelist Anne de Vries had deteriorated. Gilberg appeared to have his own ideas about his models' connection to the soil, and Anne de Vries simply no longer trusted him. In Gilberg's opinion, a farmer from one region could just as well be classified as belonging to another region, while, for the editors, the it was crucial that the models be autochthonous. The incident of Gilberg's "fraud" touched a nerve. For Meertens and De Vries, photography could assist the study of folklore in representing the regional physiognomy and the character of the people, and Gilberg's careless switching of regions would negate this documentary effort. After a visit to the photographer in Zeist, De Vries sighed that Gilberg did not understand the social meaning of photography, and did not acknowledge any "feelings of guilt". Although Gilberg now suddenly declared that he had indeed given the right location for the photo in *People of the Netherlands*, Anne de Vries had seen enough. Gilberg's attitude made a mockery of the representation of the connection between region and physiognomy. "All he cares for is the artistic value of his work."[8] For this reason, the editors ended up with Ferdinand Wilhelm van Malsen. De Vries praised Van Malsen's qualities and his appreciation of the documentary function of photography. The Utrecht photographer had travelled across the Netherlands, supplied excellent work, was "a pleasant, easy-going chap", and "feels 'scientific'": "Just as you do, he is able to identify different races in photos."[9] The hope and expectation was, therefore, that Van Malsen, unlike Gilberg, would be concerned with more than the images' artistic significance. Note also how Anne de Vries saw the reading of race as a kind of art of observation that Meertens and the photographer had apparently mastered.

From Van Malsen's life story, it can be deduced that the photographer viewed the assignment as more than just a chore. The course of Van

Malsen's life took him from Christian socialism, to communism, vegetarianism, and anarchism, and even a brief connection to National Socialism. From this course, we are able to deduce a familiarity with concepts connected with the people and the popular, as well as a certain idealization of the country. His convictions, moreover, were quite similar to Meertens' Christian socialist, pacifist and vegetarian principles.

There were various schools devoted to visualizing the embodied nation. For racial photography, optimal measurability of the model within the image was central, and a precise photographic print of the outward body was sufficient to achieve this measurability. For this group of photographers, the law of averages reigned. The second school, however, emphasized the penetration of a nation's inner life, which was equivalent to a people's character, by means of a two-dimensional photo. Here, the photo acted as the medium that established the connection between body and mind. One photo was enough (cf. Ensel, 2013).

The introduction of the Dutch word for a people's character, "*volkskarakter*", dates back to the time when Willem Ockerse was writing his Characterology. Throughout the whole of the nineteenth century, and well into the 1930s, the people's character was central to the idea of nation (Blaas, 2000; Kloek & Mijnhardt, 2001). In line with the shifts of meaning that occurred regarding the concept of a "people", researchers initially went in search of characterological models among the elite, but later began recruiting subjects from among the "common people".

German scientists took the lead. The nineteenth century had left the twentieth both a materialistic and an idealistic view of human beings as members of nations. In materialism, the human body was central; in idealism, the mental powers. Germany supplied the theoretical input for the latter philosophy, in which a broad array of strategies was developed to pinpoint what makes a people or a nation unique. In pursuit of this goal, the concept of *Volksgeist* was introduced halfway through the nineteenth century. Those who first made use of this concept – referring to themselves as *Völkerpsychologen* – maintained the centrality of two important elements: that which is shared by humans worldwide – the psychological unity of humankind – and that which distinguishes the individual from the collective. After the turn of the century, increasing emphasis was placed upon the idea that the individual was completely shaped by the collective (Kalmar, 1987; Smith, 1991). It followed from this notion that, in studying a single individual, it was possible to see the reflection of a people's nature. This crass thought, which put an end to individuality and freedom of choice (just as race theory does), reared its head in ethnology, folklore, and

the gradually less popular psychology of the people that emerged during the interwar period.

The concept was especially popular in reference to country folk. It was thought that the farmer, to a much greater degree than the modern, individualized human being, harbored the traits of the people as a whole. The study of *Volksgeist*, *Volksseele* or a people's character, was supposed to involve an impalpable common "inner nature". But how can one study or visualize such an entity? From the middle of the nineteenth century onwards, the "character" of individuals (as opposed to collectives) was studied by a new branch of science, psychology.[10] One problem was the fact that the people's character (the "genius" of a people), as opposed to the character of an individual, could scarcely be determined by means of laboratory experiments. Sometimes, scientists fell back on the concept of race. None of these quantitative routes, though, led to the interpretation of photography found in books such as *The Dutch Folk Characters* and the *Greater Dutch Farmers' Book*. Photography and the interpretation of images followed a different route from that of experiment, questionnaire or the leveling force of race photography. It specialized in a semiotic interpretation of signs. A people's character had to be read, not measured or calculated. Meertens claimed that some people are expert in reading exterior signs seemingly meaningless to laymen. Just as a graphologist is able to read someone's character from his handwriting (and to recognize a forgery!), the folklorist is able to recognize regional character within a photographed face. This particular gift or tacit knowledge could hardly be formulated in general, scientifically sound terms, because it possessed no cut-and-dried rules for using it. Meertens, at any rate, never bothered to provide such rules. Nevertheless, this form of analysis was considered a "craft". Umberto Eco has described semiotics very aptly as "the discipline studying everything which can be used in order to lie" (Eco, 1976, p. 7). Their correspondence shows that De Vries and Meertens must have believed this as well. A measurement can be taken correctly or incorrectly, but attributing meaning to an image is open to interpretation. The latter is a process in which all the different signs contained within a photo influence each other as we formulate a plausible guess about the hidden character and narrative of the Heimat.

Looking for illustrations for the texts, Meertens and De Vries were not interested in the "old" race photography – "pure frontal or pure profile" (Maxwell, 1998, p. 49) – nor did they opt for folklore photography, in which models were captured full-length together with cultural artefacts.

Instead, they wanted portrait photos placed within a landscape, in keeping with the photographic tradition that had gradually been developing over the past ten years, and which had moved from capturing "common folk" at work or in full-length portraits, to portrait photography that featured radiant, nameless examples of "the people" in the open air.

Portrait photography was an old and stable genre. Nonetheless, ideas about the art form began to shift during the interwar period, a transformation triggered by psychology's emerging theories on the individual (Sobieszek, 1999). How is it possible to achieve a good likeness in a portrait when there is such a thing as a multiple personality? And how is it possible to capture the idea that still waters run deep – as Sigmund Freud had argued – in a single "essentialist" portrait? There were many experiments in portraiture, but the urge to deduce an inner essence from the face did not disappear. In the development of Heimat portraits, some German photographers, including, among others, August Sander and Helmar Lerski, do demonstrate a desire to find the character lying beneath surface appearances. *Antlitz der Zeit* (1929), by Sander, provided photographers with an influential example of this search. Sander's project consisted of building a collection of professional portraits. The series was composed of full-length portraits. The model's identity could be deduced from his or her clothes, attributes, and the background against which the model was placed. Even though he depicted the entire body, along with identity-determining clothing and other attributes, Sander himself thought that facial expression was crucial. In his opinion, a person's life story could be read in the face. It was in the face that one encountered the unique aspect, the aura, as Walter Benjamin's philosophy of art termed it, of the individual model. According to one compliment, Sander's portraits of farmers showed that his subjects radiated "an inner peace locked against the outside", but possessed "human and devilish depths under the surface" (according to the painter Jankel Adler, as quoted in Sander, 1996, p.136).

Also influential, especially in terms of perspective and lighting, was the photo book *Köpfe des Alltags* (1928-1931) by Helmar Lerski. By using a strong lateral light source, Lerski accomplished a sculptural effect in his portraits. Rubbing the model's skin with a Vaseline-based ointment enhanced the registration of its texture. Lerski tried to get as close as possible to his models' skin, and thus to capture a natural essence, unrestricted by civilization or conventions. "It seemed to me as if I saw inside the man, as if I could make visible the invisible", Lerski would say in reference to his first photographic experiment (Anonymous, 1961). In the Netherlands,

Martien Coppens was a great admirer of Lerski's portraits. According to Coppens, the photographer should penetrate to "a person's innermost core, to his character", and depict "a person's inner soul by means of a mechanical instrument" (Coppens, 1937; 1946). Hans Gilberg had also distinguished himself as the author of an "images of life" photo series that displayed a folkloristic and Heimat perspective. The photos for Waterink's article on the people's character in *People of the Netherlands* were Gilberg's, and had also appeared in *Disappearing People*. In the latter, Roel Houwink provided commentary for the photos. Houwink saw "the proper nature of the farmer as disappearing human type" depicted in the photos. We do not know whether or not Gilberg also thought along these lines, but judging by his troubles with Meertens and De Vries, the photographer restricted himself instead to aesthetically assessing his work. Houwink, on the other hand, gave his interpretations of the photos free rein. In his opinion, the modernization of rural life could be read in the face, which led him to define the norm, "against those who deviate from that norm, against those who pose a threat to the biological heritage" (Foucault, 2003, p. 61).

> When one sees the face of the father next to his son, one sees an unbridgeable gap between the two. The family traits may not have been erased, but they have taken on a completely different meaning in the entirety of the face.

The modernization of the Netherlands, the resulting dullness or even standardization of emotional life, had all left their traces on the national physiognomy. Houwink stated that the modern, urban face was superficial, lacking the "authenticity" and "depth" of the rural face. The assumed regional variation of the face – which was jeopardized by increasing dullness – was connected to the idea that the landscape influenced a people's character, and was readable in the face: for instance, the introverted character of a Veluwe farmer was connected to the "grandly bleak landscape". Houwink also presented himself as an expert reader of the signs hidden within the images. The inner life of the farmer could be read in his face. By capturing a model's essence in a "monumental head" or an "image of life", the photographer would also, supposedly, have succeeded in pinpointing the inner nature of the community being represented by the model. It was here that the key to the connection between the appearance and inner life of a (member of a) community was to be found.

This article has been an attempt to reveal the building blocks of a biological worldview, one in which the body is a crucial marker of ethno-national identity. Together with *People of the Netherlands*, *The Dutch Folk Characters* is testimony to the fascinating quest of a mixed group of scholars, publicists and photographers in search of Dutchness in the 1930s. In the most literal sense, Meertens and Anne de Vries as well as Jan de Vries attempted to localize the existence of the individual Dutch person within an authentic people still living in a limited number of the country's villages and in working-class districts within its large cities. The effort to project the face and the story of the nation onto an affective Other is evidenced in the photo reportages.

For a long time, Dutch nationalism has been treated as an oxymoron, which explains how neo-nationalism was received with so much surprise at the turn of the century. Textbook Dutch nationalism was supposed to be "weak", civic and inclusive. Recently this has been termed, rather ironically, Dutch anti-nationalist nationalism (Kešić & Duyvendak, 2016). In this chapter, I particularly wanted to point out the nationalist discourse of race and ethno-types that also has a history in the Netherlands. Furthermore, it has been passed on into the twenty-first century, in particular by way of race science, the social sciences, documentary photography and cinematography. I believe we can associate the aforementioned "surprise" about the seemingly sudden rise of nationalistic feelings with the aphasia concerning the long-term presence of racial formations that the anthropologist Stoler (2011) has pinpointed for France and sociologist Paul Gilroy (1987) for Great Britain. Aphasia, then, is not so much "a matter of ignorance or absence" as it is "an occlusion", a misrecognition and a dissociation of knowledge and feelings.

In the introduction, I said that I would consider how my findings may impinge on demographic history. As a vignette, I take a chapter devoted to migration in Engelen's demographic history. Engelen (2009) indicates the main trends in the influx of 'strangers' in the Netherlands, based on the registration of nationality, but he also signals a methodological problem for recent migration history. People from the former Dutch colonies, as well as numerous descendants of Moroccan and Turkish migrants, hold Dutch nationality while at the same time they are 'clearly recognizable by their appearance'. The concept of nationality, says Engelen (2009, p. 134), thus loses 'part of its usefulness to denote citizens' ['*verliest zijn bruikbaar-*

heid om inwoners te duiden']. Migration history here quietly, that is, without reflection on the underlying assumptions, transforms into a history of identity politics. Physical appearance does indeed have a longstanding presence in thinking about the Netherlands and its inhabitants. More research will reveal its structural presence in visual media as well as in the knowledge systems of demographic, biological and folk research.

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10. Francis Galton, representative of the British tradition, had thought up his very own "pictorial statistics", to obtain an average from several photos. His "composite portraiture" consisted of superimposed and newly photographed photos. The result was "a generic portrait": "an imaginary figure possessing the average features of any given group of men." (Galton, 1919, 222*ff*).

[11]

WIM VAN MEURS

The buck-riders revisited: an international perspective

262 Legend has it that bandits known as buck-riders (or goat-riders, "bokkenrijders" in Dutch, "chevaliers du bouc" in French and "Bockreiter" in German) struck terror in the mid and late 18th century. Reports of sightings survive from what is now the southern half of the Netherlands, but also from villages and cities that now belong to neighboring Belgian and German territories such as Liège and Herzogenrath. Their activities peaked around 1740 and again around 1770, inducing local authorities to implement repressive and dissuasive measures. Several hundred buck-riders, most of them men, were caught, tortured and hanged once they had confessed their crimes (Friesen, 1992; Speetjens, 2000). However, these bandits possessed the finest 'legendary' qualities. They were said to steal from the rich and give to the poor, in the traditional Robin Hood manner.

THE BUCK-RIDERS CONTROVERSY

Most modern publications, as well as movies, comics, musical pieces and plays about the buck-riders in Dutch, French, German and Limburgian are barely concealed romantic accounts based on local lore, even those which claim to separate fact from fiction. Exactly forty years ago, however, the buck-riders were key to what might be considered the only "*Historikerstreit*" in Dutch academic historiography. Theo Engelen was one of the protagonists of this debate. Anthropologists echoed the legends by portraying the buck-riders as ordinary, law-abiding citizens who had been uprooted from their established lives by structural socio-economic changes in the region (Blok, 1979; 1991). More skeptical historians, Theo Engelen among them, insisted on the alternative explanation of criminal

activity and a self-chosen life of stealing and violence for these freebooters (Engelen, 1977; 1979a; 1979b).

Unfortunately, the buck-rider controversy has fallen victim to the Dutch tradition of "polderen" (i.e. to always seek a compromise and cover up existing disagreements). With the tripartite Wassenaar Agreement in the making (1982), the stir over the Limburgian buck-riders was politically most unwelcome because of its regionalist and Marxist overtones. In short, the question of whether the buck-riders existed at all, and if so, whether they should be classified as proto-communists, marauding soldiers, simple thugs, ardent antipapists or innocent victims of the judiciary system, remained unanswered.

A naive outsider might assume that the controversy never left the confines of the *Tijdschrift voor Sociale Geschiedenis* [Journal of Social History] and that other historians have ignored its implications. The time has come to reveal how these historical bandits held sway among Nijmegen-based historians for several decades thereafter. Most professors in the department have expressed their views on the bandits in more cautious, even veiled or metaphorical terms. Medievalist Peter Raedts is a case in point. It has been argued that his monograph on the *Nachleben* of the Middle Ages is an extensive cover-up for a handful of references to the buck-riders as a continuation of a much older rural tradition of societal charity combined with violence (Raedts, 2011). It is certainly no coincidence that Paul Klep's study on the "statistical mind" addresses the very period of buck-rider sightings, the mid-18th century (Klep, 2002). More importantly, and something which is unknown to even close collaborators, political historian Remieg Aerts' biography of statesman Johan Rudolf Thorbecke should be read allegorically (Aerts, 2018). It is noteworthy that, only a few years after the buck-riders disappeared from the stage, Thorbecke stealthily moved in and out of the Netherlands from the German hinterland. For those in the know, his intellectual first-born, "Bedenkingen aangaande het Regt en den Staat, eene beschouwing over de in 1823 uitgekomen Brieven over het Natuurregt" (1825), is an outspoken critique of the modern state and its claim to determine what is right and what is wrong. The liberal's reference to natural law is an unexpected crypto-Marxist denunciation of private property, akin to the "ideology" of the 18th-century bandits. Last, but not least, in her unpublished lectures Geertje Mak has frequently alluded to the unmistakable gendered aspects of the buck-riders. The hybrid of man and animal is well known from Greek antiquity. Arguably, the shepherds' god Pan with his characteristic goatskin cape may have been the archetypal

buck-rider. Only the scattered reports of sightings of female buck-riders are at odds with the triple masculine persona of buck, goat-beard and bandit.

In the 21st century, however, the mounted robbers deserve to be revisited from an international-comparative perspective in addition to the tacitly controversial readings offered by the Nijmegen historians over the past decades, as noted above. The present contribution ignores the obvious nexus between Robin Hood and his Limburgian comrades-in-arms. They share the trope of the highwayman who doubles as social revolutionary, identified by Eric Hobsbawm as probably one of the most universal figures in social history (Hobsbawm, 1981). As a tour de force, the ambitious objective is to compare the 18th-century looters and do-gooders to the "hajduk" in the Balkans in the 19th and early 20th centuries as well as to the post-WWII partisans of the "forest brothers" in the Baltic states.

FOREST BROTHERS AS FREEDOM FIGHTERS

During the Second World War, in all three Baltic states (Latvia, Lithuania, Estonia), small bands of brigands hid in the forests and swamps to avoid deportation to Siberia. Typically, these so-called "forest brothers" had neither the equipment nor the ambition to confront the German and Russian occupying forces. Rather, they used the vagaries of warfare to create some free space for themselves, living outside of all jurisdiction. For this reason, they should be distinguished from the guerrilla troops mobilized by the German army in the Baltic states to fight against the Red Army (and vice versa, when the fortunes of war were reversed). Nevertheless, many a group of forest brothers may have been the remnant of a much larger guerrilla force. Inevitable, they were sometimes supported by the people of the villages from which they came, but in other cases they took what they needed by force. Thus, they were freebooters and thieves rather than freedom fighters or partisans. Whereas other Soviet republics were known for their massive partisan groups that took on both occupying armies, the Baltic states' forest brothers are famous for their post-war tenacity. It might be argued that purging the other reconstituted republics of anti-Soviet forces was a higher priority for the Kremlin. Due to this, some pockets of Baltic bandits soldiered on, playing hide and seek with the authorities until 1952. Even after the 1953 amnesty, some lone wolves refused to return to society, and the last Estonian forest brother was reportedly

shot by the KGB in 1978. Tellingly, the Soviet authorities refused to consider them freedom fighters and those arrested were sentenced as common criminals and vagabonds — a crime in itself according to Soviet law (Laar, 2005; Tegeler, 2001).

At first sight, the differences between the forest brothers and the buck-riders are more obvious than the parallels. Unlike their mounted Limburgian counterparts, the forest brothers probably travelled mostly on foot, stealing sheep, goats, chickens and other livestock for food. The Limburgian landscape was too densely populated, even in the eighteenth century, to allow free-riders to live completely off the grid for long periods of time. Conversely, their Baltic counterparts could easily hide in the extensive forests of Estonia and even more easily in the treacherous and virtually uninhabited swamps of the Belarus-Lithuania borderland. A consequence of this was that buck-riders could simply give up their other lives and resume their identities as the peasants, blacksmiths or pedlars they had been all along, whereas the return of forest brothers after years in hiding would have provoked awkward questions.

What they have in common, however, is their ex post status as freedom fighters. The forest brothers' call to fame came half a century after the post-Stalin amnesty. The civic popular front movements demanding national liberation from Soviet occupation in the eighties in Vilnius, Tallinn and Riga all claimed their respective forest brothers as heroic predecessors. They were well aware that the much more sizeable anti-communist resistance movements during the war were anathema in the West, as they had often collaborated with Nazi Germany. Therefore, the Baltic leaders preferred to commemorate the forest brothers, the ideal combination of heroic endurance and shrewdness as well as the symbol of the oppression of small nations by the might of their Russian neighbor. These memorial tactics are best illustrated by a 1999 declaration of the Lithuanian Parliament, referring to "(…) a universal, organized, armed resistance namely, self-defense, by the Lithuanian State, (…) in Lithuania during 1944–1953, against the Soviet occupation." As the West had never recognized the Soviet annexation of the Baltic states in 1939, the forest brothers were retroactively installed as the armed forces to prove the continuity of sovereign statehood over the half-century of Soviet occupation: "The Council of the Movement of the Struggle for Freedom of Lithuania (...) constituted the supreme political and military structure (...) and was the sole legal authority within the territory of occupied Lithuania" (Seimas, 1999, p. 1-2). After the declaration of independence in 1991, the surviving forest brothers re-

ceived a small state pension and a festive annual commemoration of their resistance. In summary, what the buck-riders and the forest brothers have in common is an ex post appropriation by movements of regional or national autonomy and identity.

BALKAN HAJDUKS AS SOCIAL REVOLUTIONARIES

Much like the forest brothers in north-east Europe, the "hajduks" in south-east Europe doubled as irregular armies or "komitadji" for the newly-founded Balkan states after the First World War as well as during the wars of liberation against the sultan's Ottoman forces in the late nine-

teenth century, and the Balkan Wars, mainly in Bulgaria and Macedonia. Correspondingly, they were classified as "terrorists" by the neighboring states of Greece and Romania which claimed the same territories (Gledhill, 2010; Livanios, 1999).

The "hajduks'" claim to fame, however, is predominantly based on another aspect of their activities as "entrepreneurs of violence". The notion of national liberation is always part of the subtext, but the explicit role of the hajduks in the early modern Balkans was to take from the rich and give to the poor. Often, the rich in Balkan societies belonged to a foreign nation, whether Greek, Ottoman or German. A common phenomenon in those unruly times, these robber bands surprisingly went by the same name throughout the entire multilingual peninsula: "haydut" in Turkish, "hajdut" in Albanian, "hajdú" in Hungarian, "hajduk" in Serbo-Croatian, "haiduc" in Romanian and "chajduk" in Bulgarian. Quite unlike the forest brothers, the hajduks were legendary champions of social justice Robin Hood-style in the public imagination. In the harsh reality of weak states and minimal policing in extensive rural and mountainous regions, however, the hajduks probably stole livestock from peasants and robbed travellers on the road without much compassion for the poor and those in need (Adanir, 1982; Bracewell, 2015). With Ottoman armies and tribute-gathering disrupting the rural economy, the hajduks probably had their origins in bands of destitute peasants, marauding mercenaries and lawless shepherds. When hajduks were roaming the vicinity of one's own villages, they were a source of fear for tenant farmers. Stories of fearless and shrewd peasant-hajduks getting the better of wealthy merchants and much-hated state authorities in far-away or imaginary territories, however, were a source of legend and entertainment for the selfsame farmers.

In summary, closure in the Limburgian *Historikerstreit* required an international comparison of seemingly unrelated cases. The evidence indeed points to a historical reality of locals living outside of the law, by their own volition or tempted by a temporary absence of state authority and policing. Subsequently, their stories have been turned into romantic legends with a message of national or regional autonomy or social justice. In the end, it takes a hajduk or a forest brother to grasp the true identity of the buck-rider. Ride on, Theo, ride on – in good health and spirits!

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[12]

DOLLY VERHOEVEN

Patterns and people: the human side of history

On 19 November 1843, a little girl was born in the Middegaal neighbourhood of Veghel. She was named Geertrudis, after her maternal grandmother. Geertrudis' parents married a year earlier, when her father Antonie was 29 and her mother Anna 25. They were both originally from Veghel, but Antonie had seen more of the world while serving as a grenadier for seven years before getting married. After the wedding, Antonie and Anna ran a small farm.

Little Geertrudis died at the age of seven. Most of her brothers and sisters born after her did not reach adulthood either. Antonie and Anna had fourteen children in fourteen years. Eleven of them died very young, some even within a few weeks. Only Geertruda (1851), Johanna (1852) and Gijsbertus (1857) lived to adulthood. When Gijs was nine years old, his mother died, followed six years later by his father. Gijs and Johanna went to live with their older sister Geertruda, who had recently married.

I discovered Antonie and Anna's family in the provincial archives of Noord-Brabant several years ago, when I was researching my own family history (Verhoeven, 2000). The youngest son, Gijsbertus, is my great-grandfather, after whom I am indirectly named. The family's tragic history impressed me all the more as I slowly began to piece it together. I started by collecting the records of all fourteen births, only to discover that just three children were named in Antonie and Anna's will. By finding one date of death after another, I was able to complete the puzzle. Each discovery thrilled me as a researcher but made me sad for the poor parents who had lost yet another child.

History is about people. People who lived a long time ago, but people of flesh and blood nonetheless. We tend to forget this when we talk about major developments in history. It is easy to see Antonie and Anna's family

from this broader perspective. They comply with what demographer E.W. Hofstee (1981) refers to as the agricultural-artisanal marital and reproductive pattern (Engelen, 2009). This pattern involves marrying at a relatively late age (although not so late in their case) and the absence of birth control during the marriage. The fact that so many of their children died also fits this pattern. In nineteenth-century Noord-Brabant, infant mortality was relatively high. One reason for this was the increasingly common practice of bottle-feeding, for practical reasons on one hand and a growing sense of modesty on the other. Rather than breastfeeding a baby, a bottle of milk was placed in the cot; the milk would quickly go sour in the warm environment, with detrimental consequences for the child. Antonie and Anna fit the pattern in other ways, too: in terms of education, for instance.

We know that Antonie had had some form of education, because he signed his name on his wedding day; Anna, however, was unable to do so and instead signed her name with an x. This was not uncommon in rural Brabant; education for girls only started to take shape when nuns began to found primary schools in the nineteenth century and pastors encouraged parents to send their daughters to school. Lastly, the farm that Antonie and Anna ran also fits into the bigger picture. It consisted of a farmhouse, a barn and 4.5 hectares of land, which was not unusual at this time: small-scale farming at that time was a dominant way of life in the region (Trienekens, 1993).

With this in mind, Antonie and Anna's life story was not all that unusual. In historical-demographic terms, they met the patterns and norms. But first and foremost, they were of course just people: an ordinary man and an ordinary woman. Like everyone else, they did their best, within their realm of possibilities and the social context, to make the most out of life.

History is about people and is studied by people; people who do their best to function at the highest scholarly level. They share their knowledge through publications, by passing it on to a new generation of students during lectures, and by giving readings and presentations for a wider audience. They are also prepared to take on administrative roles when necessary. The average academic historian fits this professional pattern perfectly. And how pleasant it is when, in addition to this, scholars distinguish themselves with an open, friendly and approachable attitude.

Theo Engelen is such a scholar. In the ten years that I worked at Radboud University, I have known him as an outstanding author and speaker, someone who shares fascinating insights in an accessible way. I also have

known him as a generous colleague who did not hesitate to help me, as an academic newcomer, by teaching a course together with me. And I know him as a decisive and determined administrator, who succeeded in winning the Gelderland History teaching remit for Radboud University, a position that I have happily filled for several years now.

Theo, I suspect that a farewell to the university will not mean a farewell to historical science. I hope you will also continue to write books for young adults that focus on the personal aspect of history. With this unique combination of interests and skills, you reveal in word and deed that, in the end, history is always about people.

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[4]
BUILDING BRIDGES WITHIN HISTORICAL DEMOGRAPHY

[1]

COEN VAN GALEN

Roman demography and the lure of numbers

As we all know, numbers can be deceiving. They tend to look solid, strong and trustworthy, but what do they actually mean? An unwary researcher can be lured away easily by numbers which seem to offer him or her solid information. This is especially true when standing on an interpretative crossroads, seemingly forced by the numbers to choose between two opposing views of history. As every ancient Roman could tell us, crossroads are dangerous places where ghosts and evil spirits meet. When not properly appeased, these spirits would lure the unwary traveler in the wrong direction and toward his doom. This article is a small story about a crossroads of figures that lured ancient historians into an endless, and basically unsolvable, discussion: Roman demography.

In a small way, I am part of this story. When I began working on my PhD, I had the idea that I had something to add to Roman demography. I was intrigued by the debate which had been ongoing since the nineteenth century, concerning the number of inhabitants of the Italian peninsula in the second and first centuries BC (Scheidel, 2008). Therefore, I asked Theo Engelen to become one of my supervisors. With his experience and his broad vision on demography, ranging as far as the extremes of the Eurasian land mass, I was convinced he was the person to help me avoid Eurocentric interpretations and find my way on the rough and winding road through the world of demography. In this chapter, I will discuss the problem with numbers and demography in antiquity, the discussion of Roman demography, and my own interpretation of the Roman census figures. At the end, I will come back to the crossroads.

At its heart, the debate on Roman demography is a discussion about the interpretation of the Roman census figures, the total numbers counted during different censuses. The interpretation is difficult as the census fig-

ures rose quickly in the second and first centuries BC: from 310,000 citizens in 130 BC, to 910,000 in 69 BC, to more than four million in 28 BC. Although part of this rise can be explained by the extension of Roman citizenship to most of the inhabitants of the Italian peninsula in the first century BC, this cannot be the whole explanation. In particular, the rise in the forty years between 69 BC and 28 BC is simply too large to be due only to natural increase and an extension of citizenship. It seems more likely that something changed in the process of census taking or that the categories of citizens counted during the census changed during this period. To a large extent, the interpretation of Roman demographic development depends on the explanation given for this steep rise. It does not only affect how we look at the number of Roman citizens: since demographic models of the ancient world are often based on an extrapolation of the Roman census figures, it also affects the number of inhabitants calculated for the Italian peninsula, and, by extension, the whole of the Roman Empire.

From the moment that I began to work through the literature on Roman demography, I had the distinct feeling that this debate started from the wrong premises. It seemed to be based more on a nineteenth-century European vision of demography than on a Roman one, and it seemed to start from nineteenth-century categories of citizenship. Current explanations also assumed a strong top-down influence from the Roman government, especially during the reign of the first emperor Augustus. This, to me, seemed not to fit with what we know about the Roman census and Roman society. We know that only the head of each family group, the *familia*, made a declaration during the census, in which the members of the *familia* and the property of this group were declared (Northwood, 2008). In contemporary sources, the census figures are often introduced by the formula *censa sunt civium capita*, 'counted/registered are the heads of the citizens'.[1] Furthermore, the census figures are always mentioned as part of the *lustrum*, the ceremony with which the census was concluded.

Based on these clues, I wondered whether the census figures were based on a constructed category of citizens at all, such as all adult men or every person with citizen status. Could it be more simple: could it be that the census figures were simply the total number of declarations made during the census? This number was possibly relevant to the concluding *lustrum* ceremony, because it was the same number of that of all the *familiae*, the building blocks of Roman society. This would suggest that the total number of census declarations rose quickly in the first century BC, but

not necessarily the total number of citizens. In my opinion, this fitted neatly with another development in Roman society, the growing number of women who became their own head of *familia*, including married women (Van Galen, 2016). By the end of the first century BC, there seem to have been as many female heads of *familia* as male ones. If women did not make census declarations in the second century BC, but half of the census declarations were made by women in the Augustan era, than this development (together with the new groups who received citizenship in the first century BC) could easily explain the rise of the census figures. I still think it is a feasible explanation, more in line with the historical evidence, but it did not solve the underlying problem with the interpretation of numbers in antiquity.

NUMBERS AND DEMOGRAPHY IN ANTIQUITY

In his *Histories*, the Greek historian Herodotus writes about the army amassed by the Persian king Xerxes to invade Greece in 480 BC. Herodotus describes the Persian troops and concludes that the complete Persian army and fleet, including support troops, comprised a grant total of 5,283,220 people.[2] Herodotus wrote his work only forty years after the war itself and his description of the Persian army is very specific and put into context. It seems to be a figure as reliable as one can get in antiquity. However, this figure become less convincing once we realize that it suggests that the Persian army for only this one military campaign was already twice as large as the total number of soldiers enlisted in the Union army for the whole of the American Civil War. Based on the assumption that an army of this size is unrealistic, most historians dismiss the figures, suggesting that Herodotus must have made a calculation error (Barkworth, 1992).

Quantitative historical demographic research is mainly based on populations in the nineteenth and twentieth centuries, because for this period good archival sources are available. Early modern demographic information is far more limited, often more difficult to interpret, and mainly available only from certain areas, mostly in (Western) Europe. For periods prior to the early modern era, studying demography becomes even more difficult. The subject of numbers in ancient sources is a vexed one. There are hardly any original archival documents, except for some papyrus documents found mainly in Egypt (Bagnall & Frier, 1994). Most figures handed

down to us from antiquity are either found on inscriptions or in literary texts.

Although no figures can be taken at face value, these are even more problematic because they were handed down to us as part of a narrative. Figures are often presented as part of a literary construction, without context and without information about the sources upon which they are based. There is also a problem of transmission. Literary texts and inscriptions are often incomplete. Furthermore, the literary texts which we possess today are not the original texts. They have been hand-copied a number of times, and often abbreviated, since antiquity. This means that copy errors are very likely to have been introduced into the manuscript tradition, which for numbers are hard to detect. Even when we know that a mistake has been made, it is rarely possible to make a correction. For example, the Roman writer Livy mentions that the census figure for the census of 174/173 BC was lower than that of the previous census. However, the figure transmitted to us is actually higher.[3] Inscriptions seem more reliable, but they too were prone to errors. Even in an important inscription such as the *Res Gestae*, the political testament of the emperor Augustus, the number of Roman citizens in 28 BC is given as 4,063,000 in the Latin text, but 4,630,000 in the Greek version: an obvious inscription error (Cooley, 2009).

The figures which are available are often not intended to give demographic information, but they can be used in an indirect way to calculate population figures. Calculations of this type are often based on military strength at some pivotal moment in a state's history, for example Athens in 431 BC or Rome and its allies in 225 BC.[4] To derive a population figure from these military figures, we have to estimate what percentage of the free male population was enlisted in the army, which groups were left out, what the ratio was between men, women and children, and what the ratio was between free citizens, non-citizens and slaves. This suggests a whole range of different outcomes (Garnsey, 1988; Gomme, 1933; Hansen, 1986). Other types of figures have this problem as well. What does it mean when Xenophon mentions that there were 10,000 households in early fourth-century BC Athens?[5] Is this a purely conventional figure, only meant to suggest that there were many households in Athens, or is it a rounded number based on some sort of reliable information? Even if it is reliable, how many people does it imply? Do we know enough about Athenian household formation to calculate numbers based on this remark?

Even figures which directly refer to population figures are open to interpretation. Take for example the one known inscription relating to what

is probably the most famous Roman census, that of the Roman province of Syria and the Jewish territories mentioned in the *Gospel of Luke* 2.1-2. The auxiliary prefect Q. Aemilius Secundus was responsible for a part of this census in the city-state of Apamea on the Orontes around AD 6. He put up an inscription in which he mentioned that 117,000 *hominum civium* were counted in Apamea.[6] What does that mean? Are all people counted within the city-state included in this figure? Or only people with citizen status? Or only full citizens, for example adult men? Even an inscription like this leads to endless discussions (Cumont, 1934; Kennedy, 2006).

The problem is not only a lack of definition (what is a household in early fourth-century Athens? What is a *cives*, a citizen, according to Aemilius Secundus?), it is also the isolation of most of these texts. We cannot place them within a trend or compare them to other figures for the same population. This is where the Roman census figures play a role. Although these figures do contain errors, as mentioned above, they offer a series of figures ranging across 550 years. In theory, they can be used to reconstruct the development of the number of citizens of Rome during its rise to power in the ancient world. This will be discussed in the next section.

THE ROMAN CENSUS FIGURES[7]

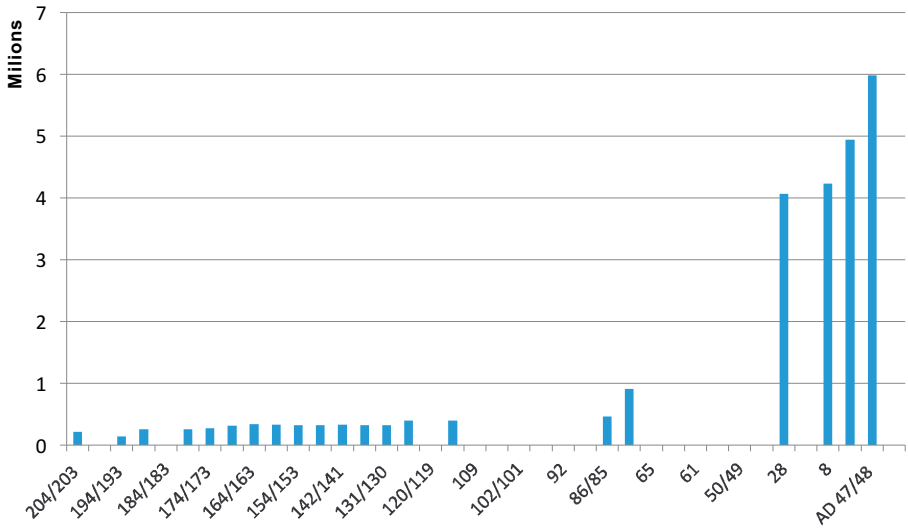
According to Roman tradition, the census was established in the time of the Roman kings, before the Republic. The last census was held during the early Empire in AD 73/74.[8] The census was undertaken by two *censores*, magistrates who were specially elected every five years, to carry out a series of long-term tasks for the Roman Republic. They organized large-scale public building projects, rented out public land and organized the citizens into voting groups and tax classes. Citizens had to declare their *familia* to the *censor*, including family members in their authority and their property (Northwood, 2008; Suolahti, 1963). The *censores* had 18 months to complete their tasks. They ended their magistracies with the *lustrum*. During this closing ceremony of the census, the *censores* made a sacrifice to appease the gods for all sacrilegious acts perpetrated by Roman citizens since the last census. Since the ultimate aim was to make peace with the gods, the *censores* were supposed to set moral standards for the citizens and the elite of Rome (Astin, 1988).

Our knowledge of the census is limited. All that we know about the administrative process of the registration of the citizens can be summarized

in a few pages, based on small snippets of information found in the works of at least ten different Roman writers (Northwood, 2007). From literary sources, it is known that the declarations were made by the heads of the family groups, the *familiae*. They were the citizens who were *sui iuris*, 'in their own right'. Only citizens *sui iuris* could own property and they were supposed to represent their family members who were in their authority. The citizens *sui iuris* declared themselves, the members of their *familia* and their property, including slaves. No declaration of a Roman citizen has survived in the archeological record, nor have any lists of citizens, or laws which could give an insight in the purpose of the census.[9]

The census would have been no more than a footnote in history, were it not for the fact that a series of census figures have survived in the sources. These numbers seem to express numbers extracted from the registrations carried out during a census. They are the only continuous sequence of quantative information on populations of a pre-modern society (Brunt, 1971). Especially the figures of the second and first century have grabbed the attention of ancient historians for the past 150 years (see Figure 1).

Figure 1: the Roman census figures between 204/203 BC and AD 73/74.



Source: Brunt, (1971, p. 13)[10]

However, like most other figures from the ancient world, the census figures lack a clear context. It is not clear which citizens are included in the formula *censa sunt civium capita*, 'counted/registered are the heads of the citizens', which sometimes accompanies the census figures.[11] This lack of context is more problematic due to the fourfold increase in the census figures over a forty-year period, between the last Republican census of 70/69 BC and the first imperial census in 28 BC. Explaining this rise is the central problem for any historian who wants to transform the census figures into demographic information.

Since the nineteenth century, a number of interpretations have been put forward to explain this rise, in order to create relevant figures. Three interpretations are still in use today, the most well-known of which is the one proposed by Beloch (1886) and supported by Brunt (1971) in the 1970s. Beloch came up with the idea that during the Republic only adult males were counted, but that the first emperor Augustus changed this to a count of all citizens: men, women and children. This interpretation is based on only a few snippets of sources, surrounded by a thick layer of reasoning. For the crucial change in counting under Augustus, Beloch gives no sources at all. However, the strong point of Beloch's explanation is that it creates a simple model which can be used to calculate total numbers of citizens both before and after the fourfold rise. According to this model, the Roman citizenry was small, with only 4 to 5 million people in 28 BC (Brunt, 1971; De Ligt, 2012; Scheidel, 2004).

Other historians reacted to Beloch's interpretation by putting forward a second model based on the idea that only adult males were counted, both during the Republic and the Empire (Frank, 1924; Lo Cascio & Malanima, 2005; Wiseman, 1969). According to this model, the fourfold rise was explained by assuming that census declarations could only be made in Rome itself during the Republic. Once Roman citizens started to live further away from the capital, the actual number of citizens and the number of citizens counted started to diverge, probably as early as the third century BC. This problem was solved by the introduction of a decentralized census in the middle of the first century BC, the results of which became visible in the Augustan census figures (Lo Cascio, 1999; 2001). In this interpretation, the four million citizens counted in 28 BC were only adult male citizens. Because of the gradual divergence between the census figures and the supposed real population, this model is only useful for calculating figures of citizens from 28 BC onward. It suggests a total number of at least thirteen million citizens at the start of the Empire,

more than three times as high as the number in Beloch's interpretation. The gap between the low and high interpretations of the Roman census figures seems unbridgeable, and supporters of both models have pointed out that the demographic outcome of the other model is either unrealistically high or low (Scheidel, 2008). This provided the opportunity for a third interpretation to come into existence, in which the census figures were interpreted as the sum of all male heads of the *familia*, the citizens *sui iuris* (Hin, 2007; 2013). This idea first came up in the nineteenth century, but it was mostly ignored because the numbers of male citizens *sui iuris* could not explain the fourfold rise (Bourne, 1952; Hildebrand, 1866; Mommsen, 1874; Nissen, 1902; Zumpt, 1841).

In 2007, Hin reanimated this model by suggesting that the rise could
 have been the result of a decision by the emperor Augustus to count not only the adult male heads of households, but all citizens *sui iuris*. Every citizen without a living ancestor in the male line was considered to be *sui iuris*, which meant that Augustus started to count orphans and some of the adult women as well. According to Hin, the estimations of the percentage of widows in particular among the Roman population have been too low in the past. When they were taken into account this group was large enough to explain the fourfold rise (Hin, 2007). She estimated the number of citizens at eight to ten million persons in 28 BC, somewhere in the middle between the high and low counts.

All three interpretations try to construct an argument with the aim of converting the census figures into useable demographic information. Although they use exactly the same sources, a comparison between the low, high and *sui iuris* interpretations shows a remarkable difference in outcome, ranging from four to thirteen million citizens in 28 BC. To get a total number of inhabitants of the Italian peninsula in this period, slaves and resident non-citizen free foreigners have to be added to the number of citizens. For slaves in particular there are no sources that can be used to suggest an estimate. The number of slaves is a complete guess: the suggestions range from one to three million slaves in Italy during the reign of Augustus (Beloch, 1886; Brunt, 1971; Hopkins, 1978; Scheidel, 2005).

The differences in outcome between the three models is understandable when we look at the argumentative structure used. As mentioned before, due to the nature of the sources it is difficult to assess whether the situation described is exceptional or a common occurrence. An ancient historian who wants to comment on social or demographic developments in general has to refer to what historical sociologist Keith Hopkins (1978, p. 19-20) has called the 'Wigwam argument':

> Unfortunately there is hardly any sound evidence with which this generalisation can be validated; yet it seems more attractive than any alternative I can think of. There are several pieces of evidence, each insufficient or untrustworthy in itself, which seem collectively to confirm it. I call this the wigwam argument: each pole would fall down by itself, but together the poles stand up, by leaning on each other; they point roughly in the same direction, and circumscribe 'truth'. I realize that it is dangerous to accept the general tenor of the evidence while doubting the truth of individual pieces. But this is what we are forced to do in reconstructing even the crude outlines of Rome's (…) social structure.

What Hopkins does not make explicit is that this 'Wigwam argument' needs thick layers of logic, models and comparisons with other historical periods to create an argumentative structure which can hold the limited number of sources together. Such a working method is not unique to ancient history. Every historian is familiar with situations in which comparisons and interpretations are needed to supplement the deficient sources. The 'Wigwam argument' offers the possibility of showing possible connections between sources, but it runs the risk of supporting the outcome that seems most logical to the researcher. Ancient history is more sensitive to this risk, because there are often fewer sticks available for building the wigwam, and the distance between these sticks is often greater than those in later historical periods.

A fine example of the use of this 'Wigwam argument' in ancient demography is the article *Human mobility in Roman Italy, 1: The free population* by Walter Scheidel (2004), in which he discussed mobility among the free population of Italy. In this 26-page article, the author starts with the statement that he supports the low interpretation as given by Beloch

and Brunt. His main argument is that he seems to think that the high interpretation is unlikely. In the whole article, he refers to only seven small fragments of source texts, five of which are directly connected to the discussion on Roman census figures mentioned above. The rest of the article is filled with models for migration and comparisons. Let this be clear: it is a good article in which Scheidel makes the most of the limited data, but, in the end, the outcome is based on reasoning, which in turn is based on an underlying assumption about the right interpretation of the census figures.

These underlying assumptions are interesting, because what they seem to come down to is belief in how Roman society should have worked. A proponent of the high interpretation of the census figures once told me that he could not support the low interpretation, because he could not accept that a mighty and powerful state as the Roman Empire had so few citizens. For him, a high number of citizens equaled military and political power. Beloch chose a low interpretation, partly as a reaction to exaggerated claims for the numbers made by earlier scholars, but also partly because for him cultural development equaled a larger population. A high interpretation was not acceptable because it would mean that the Italian peninsula had more inhabitants than Greece, which was seen by him as the pinnacle of cultural development in the first century BC (Beloch, 1913).

Both supporters of the low and high interpretations start from the assumption that only adult men were counted in the census figures. Elsewhere, I have argued that this assumption is influenced by a nineteenth-century vision of citizenship, in which the adult man, as the head of his nuclear family, was central (Van Galen, 2015). This vision was associated with nineteenth-century censuses, which were often justified by the need to assess the military power of the developing nation-states. This was used to argue that the group central to the census was the adult man as a potential soldier, because 'it would be incomprehensible that the Roman state should attach any importance to figures irrelevant to military strength', according to Brunt (1971, p. 16) in his book *Italian manpower*.

The *sui iuris* interpretation as given by Hin, and my own interpretation, are not only motivated by the need to find an interpretation which avoids the low and high numbers of other interpretations, but are also based on an assumption about the working of Roman society in which not only men, but also women, played a relevant role. Such an interpretation clearly reflects the preoccupations of our contemporary society and it is difficult to see how it could have developed a century ago. What Hin shares with

the low and high interpretations is her belief in the power of the Roman government, which was able to extract the right figures within those hundreds of thousands or even millions of declarations and compile them into one census figure.

All three interpretations also share the belief in the power of one strong man, especially the first emperor Augustus, to fundamentally change the census. In all three interpretations, the transition from Republic to Empire is seen as the pivotal moment when the census is altered. There is no proof whatsoever for this assumption in the sources, but the difference between the Republic and the Empire, as constructed by historians, is felt so strongly that the rise of Augustus in itself is used as an argument that change must have taken place in this period. As if Augustus, as a sort of wizard, used a magic wand to change a five-hundred-year-old institution in one go.

I do not believe in the use of magic wands in history and I therefore do not like this type of interpretation. It seems unlikely to me that Roman society, which was inherently conservative, would have accepted an overnight change to one of its most visible institutions, especially not when carried out by a man who claimed that he was only restoring the Republic and who was still in the process of consolidating his power in 28 BC. Furthermore, I do not see what the need was for the Roman government to go through the effort of extracting from all declarations a total number of all adult men, persons with citizen status, or citizens *sui iuris* (male or otherwise). For me, the most economical explanation is that the *censores* and their staff numbered the declarations and simply used the total number of declarations as the census figure. The whole administrative operation of the census was no mean feat and the result was probably mentioned during the *lustrum* ceremony and preserved.

My own interpretation of the census suggests that it was not the government who fundamentally changed the census, but the citizens who made the declarations. In my reading of the census figures we have to take into account those who made declarations and their interests to be registered in the census. Somehow, the group who felt entitled to make a census declaration changed. As I discussed at the start of this article, I assume that there is a connection with the growing number of women who became *sui iuris*. This also happened to married women due to a change in marital tradition, which made them no longer part of their husbands' *familia*. If these women registered themselves, it would emphasize their status as the head of a *familia*, independent from their husbands, but it could

also offer them the opportunity to lay claim to the benefits of citizenship, like the corn dole in Rome and other largesse. According to my research this change in marital tradition happened in just two generations in the middle of the first century BC (Van Galen, 2016). Around the start of the common era the number of men and women *sui iuris* was almost equal. It is enough to explain the rise of the census figures.

CONCLUSION

Here the story of my alternative explanation of the Roman census figures ends. I realized that I personally find my model more attractive than the other three models. However, I also realized that there was no more to it than the existing models: the same set of sources, based on my interpretation of what Roman society should be and what I saw as the most likely demographic outcome. I was lured along a particular path by the numbers at the same crossroads which lured all the others.

In the end, I did not publish the model. I did not want to offer just a new interpretation without any new evidence. I steered away from demography and focused instead on the group which was central to my interpretation, but which had not received enough scholarly attention: female citizens. In my thesis, I researched the legal and social position of female citizens in the late Republic and the early Empire (Van Galen, 2016). The end of my demographic aspirations also meant that Theo Engelen never became my third supervisor. Fortunately for me, this did not mean the end of our connection. Theo presided, with flair, over my thesis defense in 2016. Since then, I have been fortunate that we are both part of the same group of economic, social and demographic historians at Radboud University.

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1. Livy, *Ab urbe condita*, 3.3.9, 3.24.10, 27.36.7, 35.9.2, 38.36.10, 42.10.2 and the *Res Gestae*-inscription of emperor Augustus, 8.2-4.
2. Herodotes, *Histories* 7.186.
3. Livy, *Ab urbe condita* 42.10.3. For the census figure of 179/178 BC, see Livy *Periochae* 41.
4. Athens 431 BC: Thucydides 2.31, Rome 225 BC: Polybius 2.24.
5. Xenophon, *Memorabilia* 3.6.14.
6. Inscription *CIL* 3.6687 = *ILS* 2683.
7. The text of this section is partly based on the section 'De Romeinse censuscijfers', in Van Galen (2015).
8. According to Livy, the first census was organized by king Servius Tullius in the sixth century BC, Livy, *Ab urbe condita,* 1.42.5. The last known census was in 73 AD, Pliny the Elder, *Naturalis historia,* 7.162.
9. A possible exemption is *Tabula Heracleensis* 2.142-156 (Crawford, 1996).
10. In the cases in which no figure is given, the census figure is missing or the lustrum was never completed. This was mainly the case between 95 and 28 BC, when eight out of ten censuses could not be completed due to political and military troubles in the Roman Republic.
11. Livy, *Ab urbe condita*, 3.3.9, 3.24.10, 27.36.7, 35.9.2, 38.36.10, 42.10.2; Livy, *Periochae* 11, 13, 14, 18, 19, 20, 41, 45, 46, 47, 48, 54, 56, 59, 60, 63; *Res Gestae*-inscription, 8.2-4.

[2]

AD KNOTTER

The miners of Geulle. Mining and rural transformation in Limburg (the Netherlands), 1900-1940

In this contribution, I investigate the peasant-miners in the rural village of Geulle in the Dutch province of Limburg in the first decades of the twentieth century. Geulle is situated on the river Meuse, some 15 kilometers north of Maastricht. The combination of agricultural and industrial work was known all over Europe (and indeed the world) under names like worker-peasantries or *Industriebauern*. I referred to this phenomenon in my contribution to a volume on family strategies and changing labor relations which I edited together with Theo Engelen and Michiel Baud in 1994 (Knotter, 1994, p. 39). The volume was published to substantiate a new research program of the N.W. Posthumus Institute on family and labor. It signals the start of my cooperation with Theo, which continues to this day.

In the first decades of the twentieth century, the expanding mining industry in Limburg was increasingly able to recruit miners from the countryside: at first for the mines in and around the booming mining town of Heerlen in the East, then after 1925 also for the newly built state mine Maurits in the West of South Limburg. The village of Geulle supplied miners from an early date: the census of 1909 counted 19 miners there. Geulle has not been chosen at random for my research: it is the place where Theo Engelen was born and raised. In the Wikipedia article for Geulle, he is even mentioned as a well-known person from Geulle because of his status as a writer of children's books. The Limburg mines closed around 1970, so he might remember that there were still miners living there in the 1960s. Their numbers were declining at that period, however: due to mine closure, there were only 15 miners left in Geulle in 1971 (SHCL: CBS-statistieken BH 1.3). In 1960 there had been 104, and in 1947 128 miners were living there. In 1960, Geulle had a population of 2,245; the

male laboring population numbered 621, of which miners made up almost 17 percent (SHCL: CBS-statistieken BH 1.2).

I have not investigated whether the Geulle miners still owned land in the 1960s, or were still active as part-time peasants at that time: my research ends in 1940. I was able to find out, however, that in 1947 168 out of the 300 users of land in Geulle still did not consider farming as their main occupation (56 percent). A large majority of these (156) worked a piece of land smaller than 1 hectare (SHCL: ETIL, nr. 760). In this research, I focus on the first generations of miners in Geulle and to what extent they owned land and held on to some form of agricultural activity. My main sources are the marriage registers between 1811 and 1940, the population registers between 1890 and 1940, and the land registers (cadaster) in the same period. By combining individual data for each miner in these sources, it is possible to reconstruct the numbers, characteristics and backgrounds of the peasant-miners in Geulle in the first decades of the twentieth century. With this research I hope to throw more light on the impact of the mining industry on the countryside of South Limburg in general.

MINING AND MINERS FROM THE COUNTRYSIDE IN THE WESTERN PART OF SOUTH LIMBURG1

Around 1900, coal mining in South Limburg started to expand. In the late nineteenth century several private mining companies had been founded, which began to produce coal at the beginning of the twentieth century. The most important among these were the Oranje-Nassau Mijnen in Heerlen. In 1902 the Dutch state started a mining company of its own, called State Mines. New state mines were built in villages around Heerlen and named after members of the royal family: 'Wilhelmina' in Terwinselen (1909), 'Emma' in Hoensbroek (1913), 'Hendrik' in Brunssum (1917). In the western part of South Limburg, in Geleen, a fourth state mine opened in 1925, called 'Maurits'. From the start, the new mines in and around Heerlen encountered problems in finding miners in sufficient numbers. There was no tradition of mining in this area. Only at the German border, in the town of Kerkrade, had coal been mined from a much earlier date in the so-called Domaniale Mijn. To attract miners from Kerkrade, however, the Heerlen mines had to compete with the nearby Aachen district, just across the border, which for Kerkrade miners was easier to reach. The Heerlen mines tried to overcome these difficulties by recruiting migrants

from outside Limburg, both from other parts of the Netherlands and from abroad.

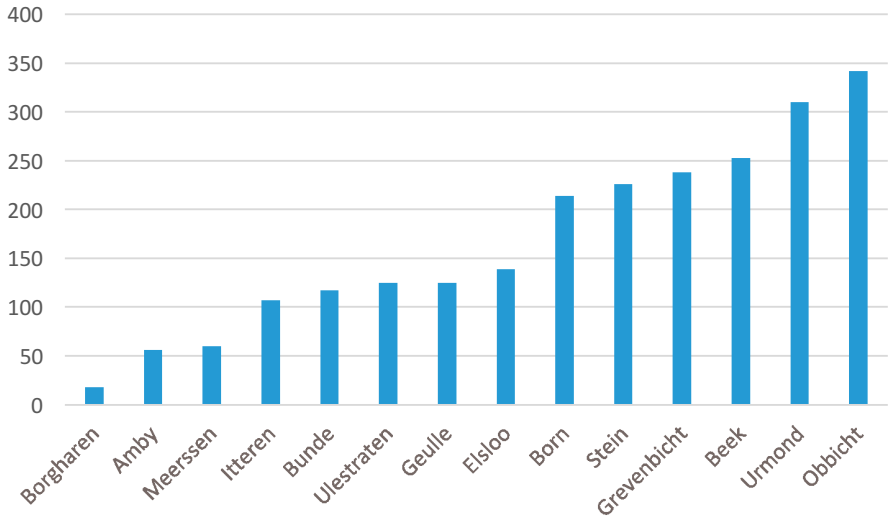
Already before World War I the Heerlen mines had started to recruit miners from among the rural population in the western and southern part of South Limburg as well. At first, these often remained part-time peasants and agricultural laborers; only the younger generation became full-time miners. The villagers were called 'train men', as they were transported to the Heerlen mines by train. In 1911, a trade union leader remarked on this (for him) apparently recent phenomenon:

> Traveling by train between Sittard [in the West] and Herzogenrath [to the East, just across the German border], you will be amazed by the large number of workers leaving for the mines from Sittard, Geleen, Stein, Elsloo, Spaubeek, Schinnen, Nuth, and all those other surrounding villages. […]. A few years ago most of these workers were agricultural laborers, now they have turned into miners (*Christelijke Mijnwerker*, 1911).

Figures from the population census of 1909 on miners in the villages in the Meuse valley North of Maastricht and West of Geleen show to what extent these had become part of the recruiting area for the mines in and around Heerlen (see Appendix 1). From north to south, miners could be found in Stein, Elsloo, Beek, Geulle and Meerssen. Apart from Meerssen, these were still genuine agricultural villages at that time: in 1909, employment in agriculture in the male laboring population varied between 46.2 percent in Beek and 69.7 percent in Stein (see Appendix 1). That newly recruited miners specifically came from these villages can be explained by the proximity of a railway station where these 'train men' could board a train to the mines (Vianen, 1908, pp. 69-70). Until 1938, Geulle had a station of its own in the hamlet of Hulsen.

After the opening of the state mine Maurits in Geleen in 1925, the mining population in these and other places in the Meuse valley grew substantially (see Appendix 1). They became part of the so-called Western Mining District in Limburg. In places situated close to Geleen, such as Stein, Elsloo, Beek and Geulle, that had 'delivered' miners to the Heerlen mines by train in the past, and now also Urmond, Obbicht en Papenhoven, Grevenbicht, and Bunde, the percentage of miners in the male laboring population increased to over 20 percent, and in some of these places (Elsloo, Obbicht en Papenhoven, Stein and Urmond) to even more than 35

Graph 1. The growth of the number of miners in each village in the Meuse valley between 1919 and 1934 (1919 =100)



Source: Algemeen Mijnwerkersfonds 1920-1935.

percent. The percentage of men working in agriculture diminished correspondingly (see Appendix 1).

The impact of the opening of the state mine Maurits becomes even clearer in Graph 1, which shows the growth of the number of miners in each village between 1919 and 1934 (1919=100). This growth was largest in villages close to the Maurits mine: Born, Stein, Grevenbicht, Beek, Urmond and Obbicht. In villages situated on the river Meuse somewhat more to the south (Itteren, Bunde, Ulestraten, Geulle, and Elsloo) the number of miners grew less; in places close to Maastricht (Amby, Borgharen, and Meerssen) their number even declined. Apparently, the pull of the Maastricht (industrial) labor market was stronger there than that of the Geleen mining industry.

Research on the recruitment of the rural population for the expanding mining industry in Limburg is scarce. What is available has been summarized in the fine chapter by Willibrord Rutten on 'the home front of the miner' in the collected volume *Mijnwerkers in Limburg: een sociale geschiedenis* ['Miners in Limburg: a social history'] (Rutten, 2012, pp. 390-392). He describes how, before World War I, miners were often also part-time peasants who viewed income from mine labor as supplementary. In many cases, family income was a result of income-pooling, consisting of

wages for mine labor and income from agricultural labor by wife and children. After World War I, mining gradually became the only source of income for working families of peasant descent. Some miners, however, together with family members, continued to work the ground of the small farm on which they had grown up and which they had inherited from their parents or parents-in-law. This situation continued until the 1940s. The next generation of miners, recruited for the mines in the 1930s, no longer felt any affinity with agricultural life.

On the transformation of the villages in the Western Mining District after the opening of the Maurits mine, two interesting reports were published in the early 1940s in the Dutch *Tijdschrift voor Economische Geographie* ['Journal of Economic Geography'] by a (to me unfamiliar) contemporary W. Sipman from Sittard (Sipman, 1943; 1944). His contribution on Geleen was written in response to the novel by the Catholic priest Jac Schreurs, *Kroniek eener parochie* ['Chronicles of a parish'], published in 1941 (Schreurs, 1941).[2] Like elsewhere in this area, the percentage of men employed in agriculture in the Geleen male labor force as a whole had declined strongly, from 58.2 percent in 1909 to 7.7 percent in 1930. Sipman argues that, long before the opening of the Maurits, most farms in the villages of the municipality of Geleen (Oud-Geleen, Krawinkel, Lutterade) were too small to gain a living and that since the development of the industrial Ruhr area from the 1870s onwards many inhabitants went to Germany each year to work there, most of them as brick makers. Schreurs wrote about this in his novel as well (Schreurs, 1941, p. 129).[3]

A similar picture arises in Sipmans' other report on the village of Stein. Few families could survive there on farming alone. A large majority of farms (77 percent) were smaller than 1 hectare, while, according to Sipman, at least 4 hectares were needed to sustain a family. He noticed much 'poverty and backwardness': "bad housing next to primitive stables, the old-fashioned manure pit next to the front door, hardly cared for chickens. Cattle and the rest are in a similar state" (Sipman, 1943: 164). Before World War I, seasonal migration had been extensive here as well: in spring a large workforce travelled to the brick ovens in the neighborhood of places like Krefeld, Cologne and Dortmund; in the autumn many crossed the border again to help with the harvesting of sugar beets in the Rhineland. In the first decades of the twentieth century, work in the Limburg mines arose as a new opportunity to gain a living. Sipman reports that most of the 20 miners counted in Stein in 1909 were employed by the state mine Wilhelmina in Terwinselen near Heerlen. Working in the mines became more

attractive during and after World War I, because the borders were closed and the German labor market had collapsed. Until that time, changing occupation from brick worker to miner had not been self-evident, as a foreman of a brick makers' team remarked in 1908:

> The brick maker hides no miner. When the campaign is over […] they look for casual work here and there, they mend their homes, and rest a week or two, before they return to the brick works again. They do not descend into the mines; some may leave their old way of life, but there is no chance that one can mold a brick maker into a miner, this attempt will fail with certainty. None of us consider working in the mines (Vianen, 1908, 14).

During and after World War I this changed: it became more common to work in the mines, even for former brick makers. After 1925, the then newly opened Maurits mine could profit from the experience which miners from Stein had gained in the Heerlen mines. In the 1920s, Stein transformed from an agricultural into a mining community. There are indications, however, that miners from the Meuse-side formed a separate group among the miners employed at the Maurits, recruited in their own networks (Homburg, 2004, p. 127). In those years there was still a category of peasant-miners in Stein, according to Sipman:

> The old miners are generally interested in agriculture. They often still live on farms and work pieces of land. Some save money, as far as they do not need it, from their earnings at the mine, to buy land and houses. In this way there are many well to do miners in Stein. The low pensions from mining labor cannot harm them, and unemployment does not bring them poverty.

But the younger generation did not like to cultivate a piece of land anymore:

> They prefer to go out rather than continue working after finishing labor at the mine, while they do not feel at home on a farm anymore. […] Because of the dismal state of most of the farms […] children prefer a job in a mine to working at the farm of their parents. Next to a higher income […] the greater amount of free time, with all its pleasures, is very appealing. To work 8½ hours [in the mine] is a lot

less strenuous than working the ground from early morning to late in the evening (Sipman, 1943, p. 165).

THE MINERS OF GEULLE

The annual reports by the municipality of Geulle on the years between 1901 and 1908 each year mention labor by inhabitants both at the brick works in Prussia and in factories in nearby places outside the municipality [presumably in Meerssen and Maastricht]. In 1908, working in Prussia is no longer mentioned and for the first time the mines come into the picture: 'many persons work at the factories in the surroundings; others at the mines in Heerlen and Kerkrade'. In the reports on the years thereafter, mines in Schaesberg and Eijgelshoven are mentioned as destinations as well. As a consequence, the railway station in Geulle became much busier, according to the annual municipal reports. They mention a number of 50 commuting miners in 1920, which had grown to 75 in 1927 (MAM Geulle, nrs. 41-69).

From these reports, one could be tempted to conclude that, like in Stein, mine labor was preceded by migratory labor by brick makers across the border. It is doubtful, however, whether this happened on a similar scale to that in the villages of Geleen and Stein, mentioned above. A sample of so-called *nationaliteitsbewijzen* ['testimonies of nationality'] (issued by the provincial authorities of Limburg as prescribed by the Prussian state since 1875), used by Frank Hovens (2017) for his research in the history of today's municipality of Meerssen (of which Geulle now forms a part), shows that the number of workers from Bunde, Geulle, Meerssen and Ulestraten that went to the Rhineland for work was not large. The sample concerned a number of 5,920 migratory workers. Only 25 of them came from Bunde, Geulle, Meerssen and Ulestraten, of which two of them were from Geulle. None of these were brick makers. Hovens' explanation that few people from these four villages went to Germany because the factories in nearby Maastricht offered alternative employment seems plausible to me (Hovens, 2017, p. 335).

In 1905 the bishop of Roermond asked the parish priests in his diocese to inform him about the number of parishioners working in Germany (RHCL archives diocese Roermond nr. 235; see also Langeweg, 2002). The Geulle priest answered that after Easter nine people from Geulle worked as brick makers near Cologne, Bonn, Kevelaer and Neuß, and that in the

autumn eight went to harvest sugar beets in Grevenbroich and Erkelenz. The local priest in Meerssen reported "that only a few of my parishioners go to work in Germany in the summer season; some 50 commute daily to Aachen, however, but they return every evening." From Elsloo a higher number of seasonal migrants is reported, some 150-170, and from Stein even 436 people were mentioned, almost all of them brick makers, according to the parish priest, who stayed in Germany for three to four months. In addition to these, each autumn 400 men went to Germany for six to seven weeks to harvest sugar beets in the Rhineland. The conclusion that migratory labor was considerably less important in Geulle than in places to the north in the Meuse valley is corroborated by these data.

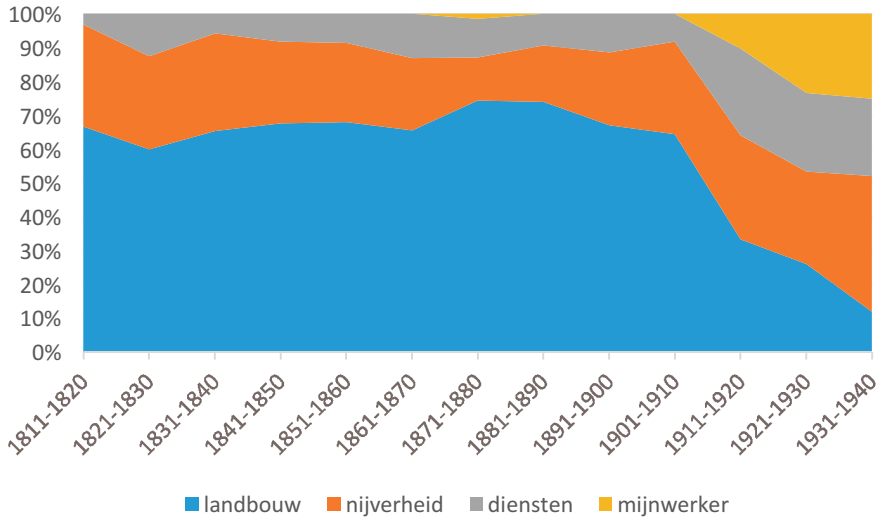
Table 1. The division of the male labor force in occupational categories in Geulle, 1909, 1930, 1947

Category	1909	1930	1947
Agriculture	65%	34%	26%
Mining	5%	13%	22%
Construction	3%	29%	14%
Industry	8%	14%	22%
Services	19%	9%	17%
N=100%	363	528	587

Sources: see Appendix 1.

A comparison between the outcomes of the occupational censuses in 1909, 1930 and 1947 makes clear that Geulle lost its predominantly agricultural character after 1909 (Table 1). The percentage of agriculture in the male working population declined from 65 percent in 1909 to 34 in 1930 and 26 in 1947. Mining increased from 5 percent in 1909 to 13 in 1930 and 22 in 1947. Up to 1930, the male labor force in Geulle was increasingly employed in other occupational sectors as well, especially in industry and construction. The high percentage of building workers in 1930 (29 percent) is related to the construction of the Juliana canal (parallel to the river Meuse) right through the village in the late 1920s. This is also mentioned in the annual municipal reports. On 1927 it is reported: "The working class aspires more to find work outside the municipality, mainly in the various coal mines, in the factories in Maastricht and Meerssen, and in the building trades"; in 1928, additional poor relief had to be provided because of the severe cold in December, because of which "much labor had to be postponed, mainly

Graph 2. Occupational categories of grooms married in Geulle, 1811-1940 (percentages in ten years periods)



NB landbouw=agriculture; nijverheid=industry (incl. construction); diensten=services; mijnwerker=miner.

Source: RHCL, marriage certificates Geulle (Access-database 'Wie was Wie').

on the construction of the canal". Nevertheless, general progress could be reported, because of "work in the mines, in the building trades, and on the Juliana canal" (MAM Geulle, nrs. 41-69).[4]

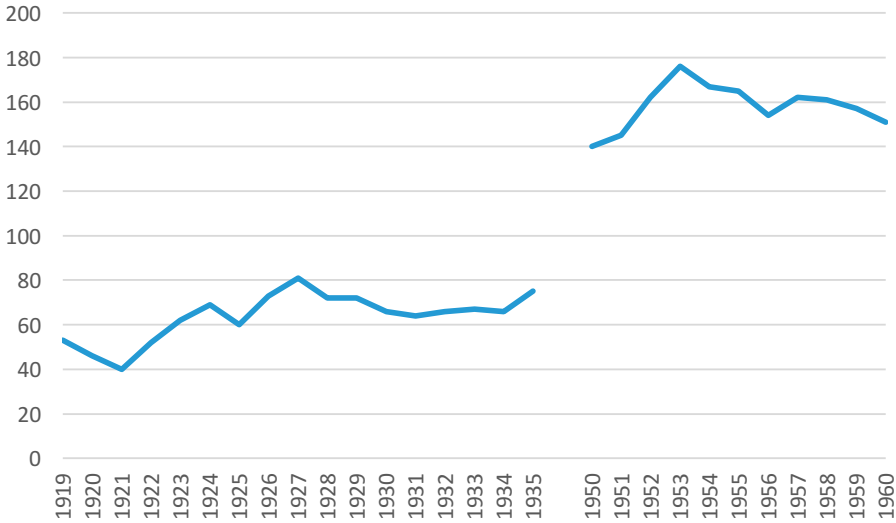
Data on the occupations of grooms in the marriage certificates in Geulle since 1811 confirm that there was a turning point around 1910 (Graph 2).[5] Not only did mining increase considerably after that year, but also industry (including construction) and services, at the expense of agriculture. To get a better picture of this, I have condensed these occupational data from the marriage certificates into two thirty-year periods before and after 1910 (Table 2).

Table 2. Occupations of grooms marrying in Geulle, 1881-1910 and 1911-1940 (percentages)

Period	Agriculture	Mining	Construction	Industry	Services	N=100%
1881-1910	68%	0%	4%	18%	10%	197
1911-1940	23%	20%	17%	17%	24%	251

Source: RHCL, marriage certificates Geulle (Access-database 'Wie was Wie').

Graph 3. The number of miners in Geulle insured by AMF*, 1919-1935 and 1950-1960*



Source: Algemeen Mijnwerkersfonds 1920-1961.

The growth of the number of miners in Geulle could be determined more precisely by the number of compulsory insured miners in the *Algemeen Mijnwerkersfonds* ['General Miners' Fund'] (AMF, established in 1918; there are no figures between 1935 and 1950). Graph 3 shows that their numbers in the 1920s increased to 83 in 1927, but thereafter declined somewhat, especially in the 1930s. After World War II, the number of miners in Geulle was considerably higher. The largest number was reached in 1953 with 176 insured miners.

The limited number of miners in Geulle enabled me to build a database of all people registered with this occupation in the population registers between 1890 and 1940. There are three registers: a first one was begun in 1890 and continued until 1920; the second one started in 1920 and was kept until 1930; the third one concerns the period 1930-1940 (MAM nrs. 570-571; nr. 477).[6] In these three registers I could find 155 miners in total, of whom 81 were not born in Geulle itself. Thirteen of these came from outside Limburg, most of them transients from the northern part of the Netherlands or from Germany. 50 of the remaining 68 miners born outside Geulle came from adjacent municipalities (Beek, Itteren, Stein, Bunde, Ulestraten, Meerssen, and Elsloo); 13 of the remaining 18 were born in Maastricht and surrounding places (Amby, Gronsveld, Heer, Berg en

Terblijt, and Eijsden), so relatively close to Geulle as well. It is clear from this that their range of mobility was not large and that the inhabitants of Geulle moved in a social space stretching from Stein in the north to Maastricht and surroundings in the south. The miners born outside Geulle were somewhat younger than those from Geulle itself (Table 3).

Table 3. Miners born in and outside Geulle according to their years of birth, 1871-1920 (percentages)

	Years of birth			
	1871-1890	1891-1900	1901-1920	N=100%
Born in Geulle	39%	30%	31%	74
Born outside Geulle	30%	31%	39%	80

Source: MAM population registers Geulle.

Marriage certificates could be found for 62 of the 74 miners born in Geulle and for 59 of the 81 born outside Geulle, both in Geulle itself and in other places in (South) Limburg. Almost half (27) of the 59 miners born outside Geulle contracted marriage in Geulle with brides born there, which explains why several of them owned land in Geulle: it was acquired via their wives (see below). On the other hand, 19 of 62 miners born in Geulle had their marriage registered elsewhere. Most of the marriages outside Geulle were registered in places nearby as well: only 8 of these had not been performed in the municipalities between Stein and Maastricht mentioned above. Again, this proves the limited range of mobility of the miners of Geulle and other villagers in the Meuse valley. It is remarkable that the mining towns in the Eastern and Western Mining Districts did not participate in this marriage pattern, although these miners commuted daily to the mines there: Geleen and Kerkrade each figure only once in this database; Heerlen and surrounding places are completely absent.

By combining the information on the occupations of miners in the population registers with those in the marriage certificates, something can be said about second jobs and/or other occupations followed by the Geulle miners (Table 4; excluding the ones born outside Limburg). From this information, it can be concluded that there was a difference between miners born in and outside Geulle: for the first group, more second jobs and other occupations are mentioned (56 percent, against 38 percent for miners from outside Geulle for whom a marriage certificate was found). Occupations in agriculture, general labor, and construction stand out. The last ones con-

cur with the growth of the building trades in the male labor force in this period, as stated above. An original or second occupation in agriculture is a minimal indication that these miners originated from, or had a connection with, farming, but miners without such an occupation could of course still own and work land. I note that designation as 'farmer' is more frequent in the oldest birth cohorts (born before 1890) than in the younger ones (11 out of 16 cases, see appendices 2 and 3), but the numbers are too small to reach any definitive conclusion.

Table 4. Miners living in Geulle with a second job, or another occupation mentioned in the population registers and marriage certificates, 1890-1940

	Born in Geulle	Born elsewhere in Limburg
Only mentioned as miner	28	34
Mentioned with another occupation	38	21
– farmer	12	4
– laborer*	10	6
– mason	6	-
– navy	5	4
– others**	5	7
No of marriage certificates found	8	13
Total	74	68

* Including factory and casual workers; ** born in Geulle: clog maker, miller, office manager, telegraphist, iron brazier; born outside Geulle: gin maker, pub owner, constable, zinc white worker, warehouse servant, smith, gamekeeper, railway worker, linier, machinist, bakers' assistant, servant.

Source: see Appendices 2 and 3.

Since in the first decade of the twentieth century this village still had an outspoken agricultural character, it is obvious that a large number of miners, who travelled to the mines in later years, were born in peasant families. To what extent this was the case becomes clear from the occupations of the fathers (or, if these were absent, the mothers) mentioned in the marriage certificates. For the miners born in Geulle, the occupation of one of the parents was found in 58 cases (see Appendix 2). 38 of these (66 percent) were farmers (both male and female). We may also note four clog makers, a long-standing specialism in Geulle. The contemporary priest and chronicler of Geulle, Kengen, wrote in 1926 about the "significant number of clog makers, especially in the hamlet of Husschenberg […] who in winter can earn a good living with this trade", but also noted that "the

high wages for the exhausting and very dangerous mine labor have destroyed the honorable but low-paid trade of clog making, as well as many other trades" (Kengen, 1926, p. 9).

The amount of unknown data on miners born outside Geulle is much larger (Appendix 3), but in these cases also there was a considerable number of farmers (male and female) among the parents: 22 out of 42 cases, that is 52 percent. So, many miners from surrounding villages also originated from peasant families, albeit less so than those born in Geulle. Perhaps this difference can be explained by the different age structure: above, it became clear that miners born outside Geulle were on average younger than the natives. For what it is worth, in both cases there were considerable minorities not born in peasant families, whose fathers held a job as wage laborer.

DWELLING PLACE AND LAND OWNERSHIP

The municipality of Geulle consists of a number of hamlets and neighborhoods, divided into Lower-Geulle in the Meuse bottomland, and Upper-Geulle, some 100 meters higher on the tableland (Kengen, 1926, p. 7-8; Wikipedia). The railway track follows the steep edge in between, and thus separates Geulle-Below from Geulle-Above. In the 1920s, the Juliana canal was built right through Geulle-Below. Geulle-Below consists of the old village cores 'Aan de Kerk' ['At the Church'] and 'Aan de Maas' ['At the Meuse'], Hulsen, the genuine center of the municipality containing the railway station and the post office, the hamlet of Brommelen, and the neighborhoods of Broekhoven, Oostbroek and Westbroek. Geulle-Above consists of Hussenberg, Snijdersberg and Moorveld.

From Table 5 it becomes clear that all neighborhoods housed miners, but that related to the male population in each neighborhood there was a clear concentration in Westbroek down in the valley and in Moorveld above on the tableland. In 'Aan de Maas', Broekhoven and Oostbroek, the share of miners equaled that of the male population. The relatively low percentage of miners in the more densely populated Hulsen is remarkable. It seems to me that the explanation must lie in the agrarian origins of the mining population in Geulle, causing the (originally) agrarian neighborhoods to supply most of them.

Table 5. The percentage of miners in each neighborhood in Geulle, related to the male population in 1947

Neighborhood	Miners	Men in 1947	Difference
Aan de Kerk/Aan de Maas	16%	14%	2%
Hussenberg/Snijdersberg	18%	23%	-5%
Hulsen	12%	21%	-9%
Moorveld	16%	10%	6%
Westbroek	24%	14%	10%
Brommelen	2%	7%	-5%
Broekhoven	4%	4%	0%
Oostbroek	8%	7%	1%
N=100%	155	967	

Sources: MAM, population registers; SHCL, CBS-statistieken, BH 1.1.

In the land registers of the municipality of Geulle, which also contain the occupations of the owners, land ownership could be found for 60 of the 142 miners traced in the population registers (excluding those born outside Limburg), that is, somewhat more than 42 percent (Table 6). Seven miners in the land registers did not appear in the population registers; I suppose that they lived outside Geulle, but nevertheless owned land there. There was hardly any difference in land ownership between miners born in Geulle and those born outside: the percentage of land owners varied between 41 and 43 percent.[7] Apparently, a substantial number of immigrants from nearby villages had acquired land in Geulle, for instance because of a marriage with a Geulle heiress: in the land registers for 16 out of 28 owners born outside Geulle, wives were explicitly mentioned as co-owners. In what follows, I therefore do not differentiate between miners born in or outside Geulle.

From these data it appears that the majority of miners (58 percent) did not own land. This does not mean that they did not work or use land. In a survey on the condition of agricultural laborers in 1908, we are told about Limburg, that laborers (who used land as well) generally owned their own house, but that "in the south [of the province] it is more customary to rent land wholly or partially" (Staatscommissie voor den Landbouw, 1908, p. 355-356). Elsewhere, we are informed about nearby Elsloo, that the population consists of "laborers or small peasants, who almost all use rented land" (Corten, 1890, p. 22). To what extent this was also true for miners living in Geulle cannot be established. Therefore we do not know how many of them were completely dependent on wages earned in the mines.

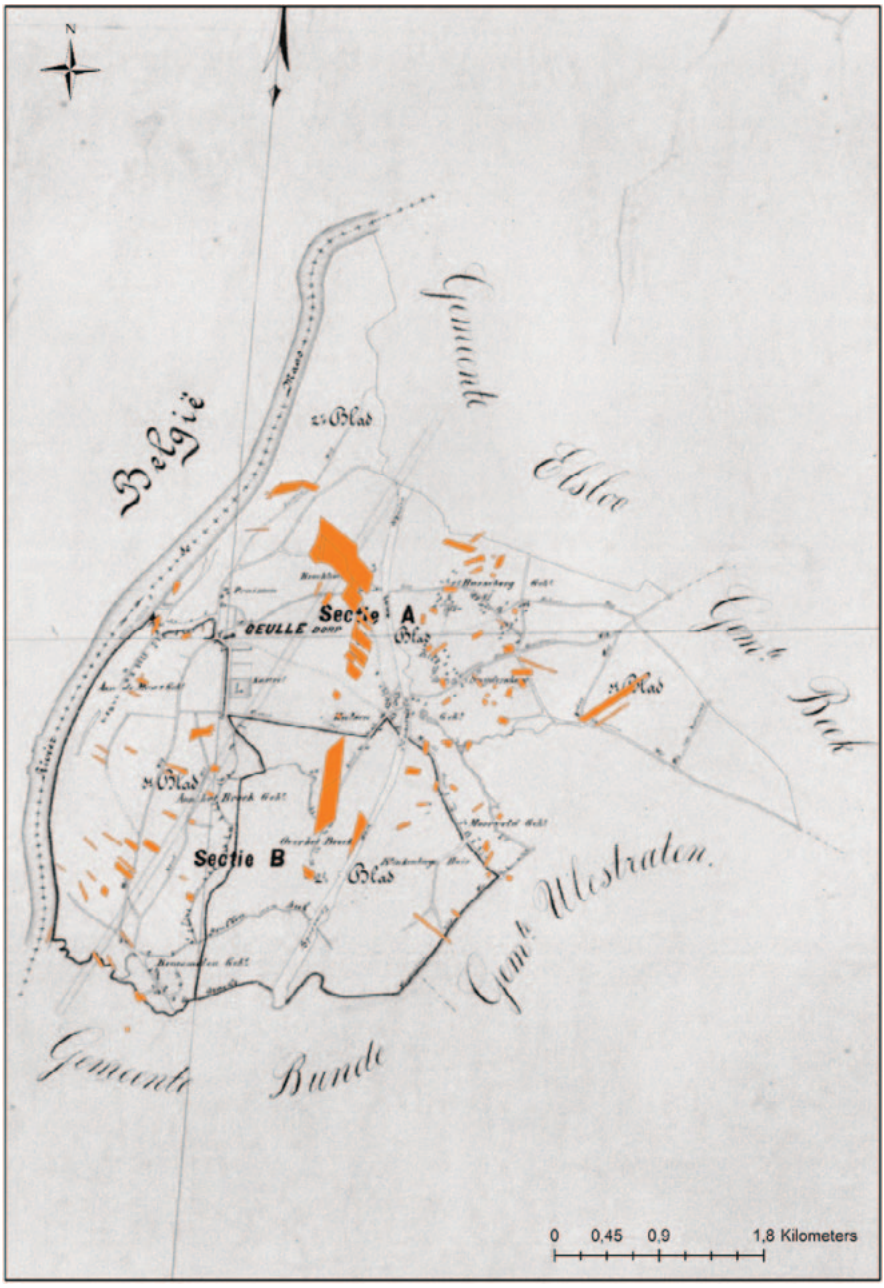
Table 6. Land ownership of miners in Geulle, 1909-1940

	Born in Geulle		Not born in Geulle*	
Number found in the land registers	32	43%	28	41%
- 0-10 are	19		15	
- 10-20 are	10		7	
- > 20 are	3		6	
Land use				
- arable land, meadow, orchard	19		15	
- house, yard, garden, shed, stable	5		12	
- unknown	8		1	

* Limburg only
Source: RHCL, archives cadaster, nrs. 621-624.

Nevertheless, there were a substantial number of land owners among the Geulle miners, and we are able to detect several characteristics of this group. As was to be expected, (very) small plots were dominant: 0-10 are (1 are is 100 m²) was the most common size (in 34 out of 60 cases, that is, 57 percent). However, there were also several (9) miners owning more than 20 are of land. In spite of the preponderance of small ownership, agricultural use (as arable land, meadows, and/or orchards) was quite frequent (in more than half of the cases). In these cases, ownership did not only consist of a house with a yard or a garden. In this respect, there was a difference between miners born in and outside Geulle: the first group had more lands for agricultural use. This all makes it clear that in these years there were still strong agrarian roots in the Geulle mining population.

On the basis of maps drawn up to support the land registers by the cadastral service itself, it was possible to reconstruct the location of the land owned by miners in Geulle (see Map 1).[8] There is a notable concentration of large plots in the hamlets of Broekhoven and 'Over het Broek' (Oostbroek). Uphill, in Hussenberg and Snijdersberg, miners also owned many plots of land, but these were generally smaller. A relatively large amount of land was also owned in the outside area of the old village 'Aan de Maas'. This is not completely congruent with the concentrations of miners in the neighborhoods mentioned above, an indication that the land owning miners were perhaps not representative of the group as a whole. That there was no ownership of land by miners in the central village of Hulsen, however, is in accordance with the relative absence of miners living there.



Map 1. The location of land owned by Geulle miners, 1900-1940.

To get to know Geulle better, I have explored the village and its hamlets and neighborhoods by bicycle from my hometown of Maastricht specifically for this research. From Maastricht, I traversed the hamlets of Moorveld and Hussenberg on the tableland amidst an agrarian landscape. Downhill, along the winding road through Snijdersberg, and after passing a small tunnel under the railway track, I reached the more densely populated center of Hulsen and the agrarian hamlets of Broekhoven and Brommelen. Via the bridge over the Juliana canal, I cycled into the picturesque village 'Aan de Maas', with some old buildings around the village church of St-Martin's, the old gatehouse of the former castle, and rustic houses and farms along the Meuse dike, some of them restored by commuters. During the summer months one can cross the Meuse there on a bicycle ferry to reach Uikhoven in Belgium.

It is almost inconceivable that, in the mining period, such a rustic and idyllic village housed some hundred miners or more, an occupation that is usually associated with an industrial environment, with urban working-class quarters, and specially built colonies. Yet, this was a reality in dozens of Limburg villages. In 1947 there were 56 municipalities in Limburg with fewer than 2,500 inhabitants; 50 of these housed miners, 4,514 people in total, that is, 11 percent of the total labor force in mining at that time (calculated from: SHCL, archives ETIL nr. 1076). In this contribution, I have tried to shed more light on these rural miners by focusing on the case of Geulle. It can be concluded that the Geulle miners – and this was probably true for other inhabitants as well – did not only act locally, but were part of a social space in the Meuse valley that connected Geulle with other dwelling places in a range of 10-15 kilometers to the north and the south. Their marriage behavior showed that this social space was bordered by the Meuse as the state border in the West and the mining districts around Geleen and Heerlen in the East. Traveling daily to the mines (at first to those around Heerlen, after 1925 also to the Maurits in Geleen) was made easy because of the location of a railway station in Hulsen, where the 'train men' could board the train to Heerlen. This explains the early presence of miners in Geulle (at least since 1908).

In an agricultural village such as Geulle (in 1909, 65 percent of the working population was still engaged in agriculture), it comes as no surprise that most miners were of peasant origins. This was also true for a large proportion of the miners born elsewhere, who had moved to Geulle

because of a marriage or for other reasons. The transition to mine labor was part of a broader economic transformation: other industrial sectors, especially construction, and also services, grew in importance as well, and after 1910 increasingly supplied jobs for the (male) population of Geulle.

The combination of mining and farming among the first generations of miners, known from the literature, could also be found in Geulle. In the cadastral land registers, land ownership could be traced for more than 42 percent of the miners living in Geulle. This must be considered a minimum, as we do not know how many miners rented land. That these plots were predominantly very small is perhaps less surprising than the still very common agricultural use as arable land or a variety thereof. To what extent this agricultural use diminished with younger generations of miners, as suggested in the literature, could not be established with any certainty.

APPENDIX 1.
THE NUMBER OF MINERS IN RURAL MUNICIPALITIES IN THE MEUSE VALLEY NORTH OF MAASTRICHT AND WEST OF GELEEN, 1909, 1930 en 1947.

Municipality	Number of miners			% of miners in the male working population			% of agriculture in the male working population		
	1909	1930	1947	1909	1930	1947	1909	1930	1947
Amby	-	49	56	-	8,5%	7,8%	27,8%	14,9%	17,4%
Beek	49	306	586	4,9%	20,4%	26,5%	46,2%	26,0%	17,4%
Borgharen	-	10	29	-	2,9%	7,7%	21,7%	12,6%	12,7%
Born	-	99	219	-	12,4%	19,5%	69,7%	37,6%	21,8%
Bunde	-	82	118	-	19,3%	21,1%	28,7%	18,6%	15,2%
Elsloo	62	244	393	12,3%	31,4%	37,9%	57,0%	18,5%	15,1%
Geulle	19	68	128	5,2%	12,9%	21,8%	65,0%	33,9%	25,7%
Grevenbicht	-	127	162	-	28,5%	24,3%	44,1%	23,5%	14,7%
Itteren	-	12	24	-	7,1%	11,1%	55,0%	33,5%	31,0%
Meerssen	37	251	325	2,4%	16,5%	17,4%	11,6%	10,2%	8,5%
Obbicht en Papenhoven	-	125	188	-	32,6%	37,9%	58,3%	30,3%	21,4%
Stein	20	497	675	2,7%	44,3%	42,2%	69,7%	22,5%	11,6%
Ulestraten	-	37	60	-	10,1%	16,7%	71,3%	54,5%	40,3%
Urmond	-	220	297	-	37,5%	35,5%	75,5%	23,9%	17,5%

Sources: 1909: CBS 1912; 1930, 1947: SHCL, archives etil nrs. 923-926.

APPENDIX 2.
MINERS LIVING IN GEULLE 1890-1940 AND BORN IN GEULLE, 1871-1920

	Birth cohort					
	1871-80	1881-90	1891-1900	1901-10	1911-20	Total
Number	7	22	22	19	4	74
With a second job or other occupations mentioned	5	14	10	9	-	38
Of which						
- farmer	2	6	1	3	-	12
- (factory) (casual) laborer	3	6	1	-	-	10
- mason	-	2	4	-	-	6
- navy	-	-	-	5	-	5
- other*	-	-	4	1	-	5
Only mentioned as miner	1	5	9	9	4	28
No extra data	1	3	3	1	-	8
Occupation father						
- farmer**	5	9	15	8	1	38
- clog maker	-	3	1	-	-	4
- other***	-	6	4	5	1	16
- none or no data	2	4	2	6	2	16
Land ownership in Geulle						
Number retraced	2	13	6	8	3	32
- 0-10 are	-	7	4	6	2	19
- 10-20 are	2	3	3	1	1	10
- > 20 are	-	2	-	1	-	3
Land use						
- arable land, meadow, orchard	1	7	4	5	-	19
- house, yard, garden, shed, stable	1	3	1	-	-	5
- unknown	-	2	1	3	2	8

* clog maker, miller, office manager, telegraphist, iron brazier.
** Or, as no occupation of the father is mentioned: female farmer (mother).
*** * constable (3x), casual worker, skipper (3x), navvy, carpenter, factory worker (4x), sawyer (3x), secretary (3x), miner.

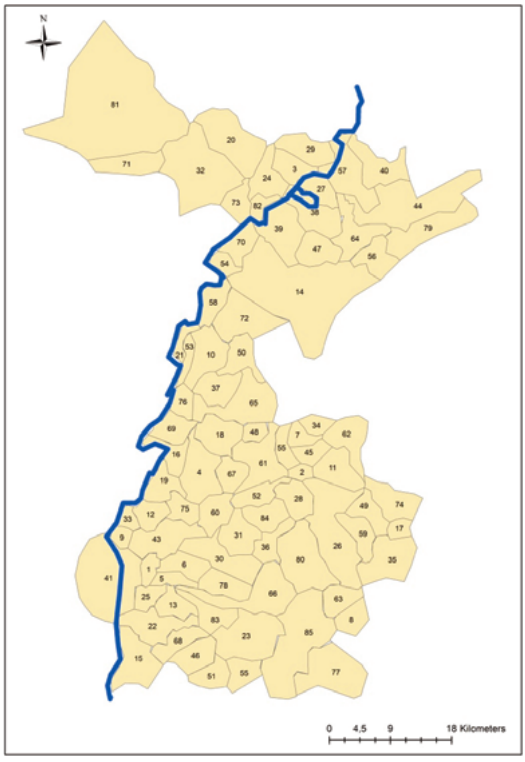
APPENDIX 3.
MINERS LIVING IN GEULLE 1890-1940 AND BORN OUTSIDE GEULLE 1871-1920

	Birth cohort					
	1871-80	**1881-90**	**1891-1900**	**1901-10**	**1911-20**	**Total**
Number	8	16	25	26	6	81
Born abroad or outside Dutch Limburg	-	2	7	4	-	13
Born in adjacent municipalities*	6	8	14	14	5	47
Born elsewhere in South Limburg**	2	6	4	8	1	21
Total elsewhere in Limburg	8	14	18	22	6	68
Of which with second job or other occupations mentioned	5	8	5	3	-	21
Of which						
- farmer	1	2	1	-	-	4
- (factory) (casual) laborer	1	2	1	2	-	6
- other***	3	4	3	1	-	11
Only mentioned as miner	-	1	9	19	5	34
No extra data	3	5	4	-	1	13
Occupation father						
- farmer****	4	3	6	8	1	22
- other*****	-	4	7	6	3	20
- none or no data	4	7	5	8	2	26
Land ownership in Geulle						
Number retraced	2	6	8	10	2	28
- 0-10 are	1	2	6	6	-	15
- 10-20 are	1	2	-	2	2	7
- > 20 are	-	2	2	2	-	6
Land use						
- arable land, meadow, orchard	1	5	2	6	1	15
- house, yard, garden, shed, stable	1	1	6	3	1	12
- unknown	-	-	-	1	-	1

*Beek, Itteren, Stein, Bunde, Ulestraten, Meerssen, Elsloo.
** Maastricht, Amby, Gronsveld, Heer, Berg en Terblijt, Eijsden, Mheer, Melick, Schinnen, Geleen, Sint-Odiliënberg, Limbricht, Roosteren.
*** gin maker, pub owner, constable, zinc white worker, warehouse servant, smith, gamekeeper, railway worker, linier, machinist, bakers' assistant servant.
**** Incl. gardener, or, as no occupation of the father is mentioned: female farmer (mother).
***** paper worker, constable, (factory) worker, tailor, smith, stoker, carter, miner.

APPENDIX 4.
LOCATION OF THE MUNICIPALITIES IN MID AND SOUTH LIMBURG IN THE 1930S

Source: Vellinga 1975: 6, 7, 60 en 62.



1 Amby
2 Amstenrade
3 Beegden
4 Beek
5 Bemelen
6 Berg en Terblijt
7 Bingelrade
8 Bocholtz
9 Borgharen
10 Born
11 Brunssum
12 Bunde
13 Cadier en Keer
14 Echt
15 Eijsden
16 Elsloo
17 Eygelshoven
18 Geleen
19 Geulle
20 Grathem
21 Grevenbicht
22 Gronsveld
23 Gulpen
24 Heel
25 Heer
26 Heerlen
27 Herten
28 Hoensbroek
29 Horn
30 Houthem
31 Hulsberg
32 Hunsel
33 Itteren
34 Jabeek
35 Kerkrade
36 Klimmen
37 Limbricht
38 Linne
39 Maasbracht
40 Maasniel
41 Maastricht
42 Margraten
43 Meerssen
44 Melick-Herkenbosch
45 Merkelbeek
46 Mheer
47 Montfort
48 Munstergeleen
49 Nieuwenhagen
50 Nieuwstadt
51 Noorbeek
52 Nuth
53 Obbicht-Papenhoven
54 Ohé en Laak
55 Oirsbeek
56 Posterholt
57 Roermond
58 Roosteren
59 Schaesberg
60 Schimmert
61 Schinnen
62 Schinveld
63 Simpelveld
64 Sint Odiliënberg
65 Sittard
66 Slenaken
67 Spaubeek
68 St.Geertruid
69 Stein
70 Stevensweert
71 Stramproy
72 Susteren
73 Thorn
74 Ubach over Worm
75 Ulestraten
76 Urmond
77 Vaals
78 Valkenburg
79 Vlodrop
80 Voerendaal
81 Weert
82 Wessem
83 Wijlre
84 Wijnandsrade
85 Wittem

APPENDIX 5.
THE CONSTRUCTION OF MAP 1.

The map is based on six cadastral maps kept by the State Archves in the Regionaal Historisch Centrum Limburg: a map of the municipality as a whole (scale 1:12.500) and five maps of the cadastral sections in the municipality A1, A2 and A3, B1 and B2 (scale 1:2.500) (RHCL kast 61 lade 12). These were copied from the original cadastral atlas around 1880. Two other cadastral maps were provided by the Municipal Archives of Meerssen (MAM nr. 1371), made available by archivist Eric Cortenraad.

In the cadastral land registers, ownership could be established for 77 miners, consisting of 163 plots of land. Because of partial or double ownership this could be reduced to 146 plots. 84 parcels could be found on the cadastral maps mentioned above; 62 parcels (with sectional number above 2600, allotted because of transactions or other changes of ownership after 1880) could be traced via a digital 'viewer' at RHCL, which enabled the retracing of the new section numbers to the old ones. As it was not always clear how much the size of the plots retraced in this way had been changed, it is not certain that the size of these plots is reproduced correctly. The locations of the plots were drawn on map 1 with the help of the digital device ArcGIS.

Municipal archives Meerssen (MAM)

Archives of the former municipality of Geulle 1797 (1782)-1933, nrs. 41-69: Verslagen van de toestand der gemeente, 1901-1935; nrs. 570-571, and 1934-1981, nr. 477: Population Registers 1890-1940; nr. 1371: Verzamelkaarten van het kadastrale plan der gemeente, secties A en B, no dates.

Regionaal Historisch Centrum Limburg (RHCL)

Archives of the diocese Roermond, nr. 235: Opgave van de parochies van Nederlandse arbeiders in Duitsland, 1905.
Marriage certificates Geulle (Access-database 'Wie was Wie').

Archives of the cadaster, nrs. 621-624: land registers Geulle, 1909-1940; kast 61 lade 12: kadastrale kaarten van registratie en successie, gemeente Geulle.

Sociaal Historisch Centrum voor Limburg (SHCL)

Collectie CBS-statistieken, BH 1.1: Uitkomsten van de volks- en beroepstelling 31 mei 1947 per gemeente van de provincie Limburg, Geulle, tabel 1: Bevolking in elk der onderdelen van de gemeente; BH 1.2: Uitkomsten van de 13e algemene volkstelling, 31 mei 1960, deel 6: Limburg, Geulle; BH 1.3: 14e algemene volkstelling annex woningtelling 28 februari 1971: definitieve uitkomsten per Limburgse gemeente, Geulle.

Archives Economisch-Technologisch Instituut in Limburg (ETIL), nr. 760: Kwantitatieve gegevens betreffende de landbouw per gemeente, 1947, Geulle; nrs. 923-926: Staten van CBS-gegevens over de bevolking per Limburgse gemeente [1930 en 1947]; nr. 1076: Woonplaatsen van het personeel der mijnen (31 december 1947) en hun aandeel in de bevolking er Limburgse gemeenten. Aantal inwoners ontleend aan de Volkstelling 31 mei 1947; aantal personen werkzaam in de mijnen meegedeeld door de mijnondernemingen via het Gewestelijk Arbeidsbureau.

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1. For the location of the places mentioned in the text see Appendix 4.
2. In the 1970s this novel was reworked into a popular television series called 'Dagboek van een herdershond' ['Diary of a sheep dog'].
3. Since then, literature on seasonal labor by Limburg brick makers has grown substantially. For an overview see Krüner & Knotter (2009).
4. On labor on the Juliana canal near Elsloo and Geulle see also Rouvroye & Schreurs (1996, p. 55-66).
5. I thank Simone Smeets of RHCL for providing this database. The database concerns men marrying in the municipality of Geulle. It is relevant to note that a significant number of these were born or living in Geulle itself, but often in surrounding municipalities, as it was customary to marry in the dwelling place of the bride.
6. I thank Eric Cortenraad of the municipal archives of Meerssen for his assistance.
7. Since in the land registers only changes in ownership are registered, it remains uncertain whether land ownership of all miners could be traced. As my research spans a relatively long period covering at least two generations, I suppose that this is not a great problem.
8. I thank Thijs van Vugt, research fellow at SHCL, for his help in making the maps. For an account of his work, see Appendix 5.

[3]

ONNO BOONSTRA

'Die andere Heimat'

Palatine migrants to Brazil, 1827-1828

"Teaching economic, social and demographic history is easy", Theo Engelen once said. "You just show your students a video of the *Heimat* television series, and they will know everything there is to know". *Heimat 1*, the much acclaimed first of a series of three which was recorded in 1981 and 1982 and directed by Edgar Reitz, tells the story of Maria Simon and her family, inhabitants of the small village of Schabbach in the Hunsrück area, south of the river Mosel in south-western Germany, between 1918 and 1982. It is a story of families and individuals whose lives are scripted by short-term political events and long-term economic, social and demographic developments (Boonstra, Bras & Derks, 2014). It emphasizes the deep influence that these developments had on everybody's choices and chances in society, visualizing the impact of slowly changing social structures on society, and, thus, striking the core of economic, social and demographic history.

In the first episode of the Heimat 1 series, called *Fernweh*, an old relative of Maria Simon remembers that his grandfather used to speak about the time, around 1850, when people from Schabbach had emigrated to Brazil. It is a reference to a theme which Edgar Reitz has pursued in two other productions. The first time that emigration to Brazil was mentioned was in the movie *Geschichten aus den Hunsrückdörfern*, which was filmed in 1981 and therefore preceded his Heimat series, and the second time was in the epic four-hour movie called *Die andere Heimat. Chronik einer Sehnsucht* from 2013, with which Reitz completed his Heimat oeuvre. As in the Heimat series, the Hunsrück area, or more specifically Schabbach, served as the geographical focal point.

In *Geschichten aus den Hunsrückdörfern*, a voice-over reads the contents of a letter from Brazil, written by a relative of Maria Simon, in which he writes about his life and the lives and other family relatives in Rio Grande do Sul, around 1860. In *Die andere Heimat*, migration to Brazil is a major storyline. The movie is set in the year 1842. The village of Schabbach has experienced seven meager years of bad harvests. The Prussian autocratic leadership rules with a heavy hand. Diseases such as tuberculosis and diphtheria take their toll, causing many young children to die. Within this context, the inhabitants of Schabbach start to think of ways to escape from these bad economic, political, social and demographic conditions. Jakob Simon, the youngest son of the village blacksmith, is one of them. Jakob is one of only a few in the village who can read and write. He likes to read about the exotic world of the Amazon which sparks his dream of making it to the New World, to be more precise Brazil.

He is not the only one. Now and then, families pack their belongings, all their tools and furniture, even the chamber pots, and leave. When representatives of a Flanders trading house come to a nearby town to look for men who would be interested in emigrating to the Empire of Brazil, with all expenses paid for the passage and even with the promise of a large piece of land, livestock and 2,000 guilders for all able craftsmen, villagers are even more tempted to break free and seek new opportunities in the New World, away from the social upheavals, the arbitrariness and the coldness of their ancestral environment.

The Simon family, too, is considering the option of moving to Brazil. For Jakob, the choice is clear. He wants to go to Brazil, to see the Amazon and to learn the culture of the local Indians. He starts to learn their languages from the books that he reads. His brother Gustav, a craftsman and a freelance soldier, has his doubts, but in the end, it is Gustav who, together with his wife, leaves for Brazil, while it is Jakob who stays behind.

FACT CHECKING

Die andere Heimat is fiction, just as the village of Shabbach is. But, at least according to Engelen, it may nevertheless serve very well as a factual historical tale which is a faithful reflection of the economic, social, demographic and political features of south-western Germany in the middle of the nineteenth century, as well as of the way in which the inhabitants of the region were enticed to migrate to the New World. But Engelen may

be wrong. The goal of this paper, therefore, is to find out whether *Die andere Heimat* shows a true picture of German emigration to Brazil around the middle of the nineteenth century. This will be done by comparing the fictional features of *Die andere Heimat* with the factual features of a group of migrants who traveled from the Palatinate, just south of the Hunsrück, to Brazil in 1827. At least three times during their journey, they were registered by local authorities. Together with additional information that was collected in the district they had left, and more general information about German migration to the New World in the nineteenth century, a wide range of economic, social and demographic characteristics of these migrants emerge. These data allow for an analysis of various similarities and differences between fact and fiction. In *Die andere Heimat*, economic conditions are bad and the migrants are poor, young and mainly craftsmen. The movie also shows that migration was most of the time a family affair, although there were a few single individuals who decided to migrate as well. It also shows that emigration was facilitated by trading houses who offered a free passage to Brazil and other benefits for those who actually made the crossing.

So, in this paper, I want to find out whether *Die andere Heimat* shows a faithful picture of German migration to Brazil around the middle of the nineteenth century. Was it above all craftsmen who left for Brazil? Were they rich or poor? Did they leave with their families or on an individual basis? Did they migrate because of bad economic and social conditions? Did they sign a long-term employment contract, with the incentive of free passage, or did they pay the journey themselves? But first, a short summary of German emigration to Brazil in the first half of the nineteenth century will be given, followed by the story of the Palatinate migrants who travelled to Brazil in 1827.

GERMAN EMIGRATION TO BRAZIL IN THE FIRST HALF OF THE NINETEENTH CENTURY

Since the beginning of the 18th century, the main target of German migrants crossing the Atlantic had been the United States, where large groups, particularly from the south-west of Germany, settled (Häberle, 1909). But Brazil became an attractive alternative destination for German emigration from 1822 onward, when the country gained independence from Portugal and the newly elected Emperor Pedro I started to drive the

economic development of his country by luring farmers and other agricultural laborers from Europe to come and work in Brazil (Carvalho Filho & Monasterio, 2012). In part because he was married to Maria Leopoldina, archduchess of Austria, he was particularly keen to attract German-speaking Europeans (Ribeiro, 1997). Special delegates were sent to Germany, Austria and Switzerland to persuade people to come to Brazil. In the German countries, for example, the Brazilian delegate Major Georg Anton von Schäffer was active not only in encouraging farmers to start a farm in Brazil, but also in seeking mercenaries for the newly formed Brazilian army (Paul, 2009).

The promotion of Brazil as an ideal country to move to was not only done with words, but also with deeds. People who applied for emigration were granted free passage, with the prospect of 77 hectares of land, as well as livestock and an interest-free advance to develop the land. As a result, thousands of Germans flocked to new settlements in Brazil, mainly to Rio Grande do Sul, the southernmost part of the country (Roche, 1959). In 1824, the first German colony, San Leopoldo, was founded there. Within three years it had been followed by five more German settlements in the same area. But after 1827, the foundation of new colonies across Brazil came to a halt, only to start again in 1846, picking up speed from 1877 onward (Carvalho Filho & Monasterio, 2012).

Not many German regions welcomed the Brazilian efforts to entice new farmers, laborers and soldiers. In the Palatinate, for instance, local authorities were warned when Major von Schäffer was in the area (Paul, 2009). According to mercantilist economic principles, most German countries regarded population wealth as a basic requirement of national prosperity, which ought to be protected by strict measures to prevent its inhabitants from leaving the country. The Bavarian authorities, for instance, issued a strict *Auswanderungsverbot* (emigration ban) as early as the start of the 18th century, which was put into use in the Palatinate from 1815 onward and persisted until 1868 (Böttcher, 1997). Only in individual cases was emigration allowed and an *Auswanderungserlaubnis* (emigration permission) issued. However, it was very difficult to get one. The application had to go through long, often vexatious bureaucratic procedures, resulting most of the time in nothing but a blunt rejection (Grabber, 2001). In the year 1827, half of the inhabitants of the village of Eßweiler (20 families with more than 120 family members), for instance, asked permission to leave the country, but no one actually acquired an emigration permit (Paul, 2009).

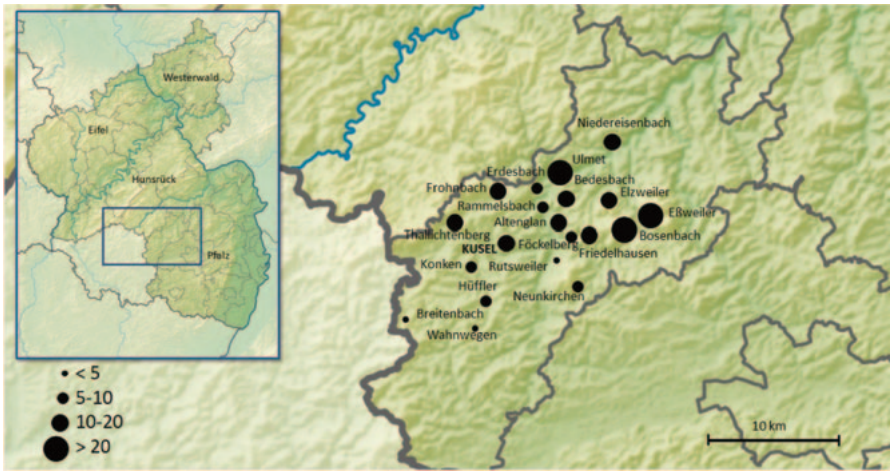

Figure 1. Place of origin of the Palatine migrants, 1827-1828

AN UNFORTUNATE JOURNEY

At the beginning of October 1828, Karl Roth from Mörscheid (Hunsrück) and Georg Robinson from Ulmet (Palatinate) signed a contract with Captain Karstens, who was commissioned by the Gieseke shipping company in Amsterdam.[1] In the contract, it was agreed that Roth and Robinson would both transport a load of 200 to 250 people across the Rhine to the Dutch border. From there, Captain Karstens would take over and conduct the migrants to Amsterdam, where his ship, the *Helena en Maria*, would be waiting to take them to Rio de Janeiro. The fare would be 120 guilders for adults and 60 guilders for children over the age of four, half of which had to be paid in advance. In order to pay for the fare and to pay off their debts, many Palatines sold their houses and goods. One month later, a group of 249 men, women and children left their home in the Palatinate and set off to Brazil. It was a group, indeed: already during their journey, they called themselves a "colony".[2] Because hardly any Palatines had received an *Auswanderungserlaubnis* from the Bavarian government, the Palatines left in the middle of the night of 7-8 November in order to cross the border with nearby Prussia unnoticed, which was not a major problem, because the Palatine migrants came from a very limited area just south of the Hunsrück. To be more specific, most of the Palatine migrants had their residence in the valley of the river Glan, which is in the eastern part of what is now Landkreis Kusel (see Figure 1). From Ulmet in the

north, where 35 people left for Brazil, to Neunkirchen in the south, where six people set off, it is less than 10 km; from Thallichtenberg in the west to Eßweiler in the east, the distance is only slightly greater.

In addition, to the 249 Palatines, an equally large group of people from the nearby Hunsrück and Eifel areas, which belonged to the kingdom of Prussia, had signed a similar contract for a passage to Brazil with the *Helena en Maria*. Unlike the Palatines, they did not have to leave in secret, because Prussia allowed its citizens to leave their country without an exit visa. Thus, most of them were in possession of a passport. When both groups reached the Dutch border at Lobith on November 22, they were stopped by the Dutch border police, who refused entry to the Netherlands for two reasons. Firstly, the lack of money caused a problem. According
320 to rules drawn up by the Dutch government ten years earlier, "landverhuizers" (migrants) with no money were not allowed to cross the border unless a Dutch civilian were to vouch for them. Since the merchants of the Gieseke shipping company as well as Captain Karstens were Germans, they had to look for a Dutchman who would be willing to be *cautionaris*. When they finally found one, they encountered a second problem. The Dutch government insisted that those without passports could not enter the country and should be sent back. In consequence the Palatine migrants were ordered to return to Bavaria. However, they refused to go, having already paid for the trip. Instead, a delegation went to The Hague to visit King William I and managed to obtain his approval for a transit through the Netherlands. On 8 December 1827, the journey was continued, although those without a passport were placed in a separate ship, guarded by military police. On 11 December, the migrants arrived in the city of Muiden, near Amsterdam. There they had to wait again, not only to be registered by the Dutch government, but also because the intended transport ship *Helena en Maria* still had to be purchased (with the migrants' transit fares). Captain Karstens and the Gieseke shipping company bought the ship on 12 December for 10,000 guilders together. It was a very old "hoeker", which turned out to be barely seaworthy and by no means big enough to accommodate all the emigrants. After the emigrants had been registered in Muiden, the *Helena en Maria* sailed with those who had a passport to the port of Nieuwediep near Den Helder, followed a few hours later by a second ship carrying those without passports. There, they had to wait another ten days for the winds to change. On 6 January 1828, when the ship was ready to sail and the last group wanted to join the first group on board the *Helena en Maria* in Den Helder, riots broke out. There simply

was not enough room for everyone. Captain Karstens then decided to cast off and set sail. Quite a few families who had paid for their passage, were left behind, but the speed with which Karstens acted caused additional problems. Some family members were separated from each other, and the luggage of many others had been brought on board while they themselves were still standing on the quay. In the end it turned out that 170 men, women and children, for the most part from the Palatine, had been left behind, without passport, money and clothes.

Again, the Dutch government intended to send this group back to Bavaria, but it was decided otherwise. First the group was sent on carts to Arnhem, near the German border, where they found temporary accommodation in a military riding school. The Arnhem population was profoundly struck by the suffering of the unfortunate emigrants. They held a collection which yielded enough money to provide them with shirts, socks and clogs. Meanwhile, it became clear to the Dutch government that sending the migrants back to the Palatinate was impossible. To get there one had to travel through Prussia, but the Prussian government did not allow people without money to do so. And even if it had been allowed, the group would have been completely destitute in the Palatinate, without any worldly possessions, and suffering from the greatest poverty. In the end, the Dutch government decided to temper justice with mercy. A frigate, the *Alexander* of Captain Marcussen, which was about to travel to Batavia in the Dutch East Indies, was chartered. Marcussen was prepared to make a detour via Rio de Janeiro. On March 27, 1828, the group of Palatines left the military riding school in Arnhem and traveled on foot to Elburg, where two small sailing ships were ready to take them across the Zuiderzee to the *Alexander*, which was waiting for them at the Nieuwediep port in Den Helder (Boonstra, 2018).

On 8 April, the *Alexander* left the Nieuwediep and set course for Rio de Janeiro. After a journey of more than two months, Captain Marcussen was able to drop off 169 grateful migrants at the port of Rio. There they boarded again, now on the sumuca *Rochas*, which transported them to Santos, 350 kilometers southwest of Rio de Janeiro. From there they traveled on foot to the village of Santo Amaro, a few kilometers from Sao Paulo, where they had received permission from the Brazilian government to establish their colony. When they arrived in Santa Amaro, they did not meet their former fellow travelers. Soon after leaving the Netherlands, the barely seaworthy *Helena en Maria* had come into great difficulties in the Channel. On 8 January 1828, during a violent storm, the masts had broken,

some of the luggage was washed away and twenty-two passengers and crew members had been thrown overboard (Hüttenberger, 2015). Out of control, the ship drifted across the Channel until it was found and brought to the English port of Falmouth, where the local population, as in Arnhem, took care of the migrants. In the end, it was not before December 1828 that the British government also allowed mercy for justice and transferred the German migrants to Brazil (Brown, 2013).

DATA

In order to describe the characteristics of the migrants who left for Brazil in November 1827, it was decided not to select those households which embarked on the *Helena en Maria* and left Den Helder on 6 January 1828, to be stranded a week later in Falmouth. Instead, the focus is on those who had to stay behind, were transported to Arnhem and left with the *Alexander* for Rio de Janeiro at the end of March 1828. For this group of 169, 141 of these being Palatine migrants, four archival lists, deeds and registers are available, which were drawn up at different places and at different times during their trip to Brazil, and which complement each other in such a way that taken together they offer a wide range of individual and household characteristics.

THE KUSEL REGISTER, JANUARY 1828[3]

As stated previously, people from the Palatinate needed permission from the Bavarian government to leave the country. In 1827, all applications were turned down. But, as we know by now, this did not stop many Palatines from leaving anyway. Confronted with this unlawful behavior, the Bavarian government ordered the local authorities to draw up a list of all Palatines who had left without permission, with the intention of confiscating their remaining assets. In the Landkreis Kusel, where nearly all Palatines in our data set originated, this register has been archived.[4] The register shows, however, that the authorities did not succeed in registering all households that left for Brazil. Nevertheless, the list is interesting, because it not only contains the names of the heads of the household, their age and profession, but also whether they were in possession of an *Aufnahmeurkunde*, (access pass for Brazil), what they had sold in order to pay for the journey, and how much of their assets they had taken along.

THE MUIDEN REGISTER, 18 DECEMBER 1827

When the migrants traveled from the Dutch border to Den Helder, they were assembled and registered at the port of Muiden, where the *Helena en Maria*, the ship intended to bring them to Brazil, was waiting for them. The Muiden list contains the names of 89 heads of households, the number of members of the household (women and children) and the number of the passport that the Dutch authorities provided for transit through the Netherlands for those households that were in possession of an exit visa.[5] When compared to the other lists, this list is not completely accurate. A number of households have been registered twice, whereas others are missing.

THE ARNHEM RECORDS, 23 APRIL 1828

At the end of their stay in Arnhem, an act of assignment was drawn up, in which the migrants transferred the claims regarding the carrier who failed to bring them to Brazil to the governor of the province of Gelderland.[6] The deed contains the names of the heads of household as well as their profession, age and place of origin. Single people are not included in the records, nor are households of which the male head had died during the journey. The deed is of interest, because it shows who was able to sign the deed and who did not.

THE RIO DE JANEIRO PASSENGER LIST, 20 JUNE 1828

On 20 June 1828, a fortnight after their arrival in Rio de Janeiro with the *Alexander*, the migrants embarked on the Portuguese sumaca *Rochas*, which took them to the city of Santos. The passenger list of this trip has been preserved (Zenha, 1950). It contains the names and ages of the migrants who had arrived with the *Alexander*, including women, children and others who belonged to the household, their relationship to the head of the household, their religion and (of the head of the household) his occupation.[7]

These four registers were merged into one dataset on the basis of the first and last names of the heads of household, whenever necessary controlled using information about their place of origin. This dataset, called the heads of households dataset, contains information on age, origin, household size,

occupation, religion, literacy and financial assets of the heads of households. Next to this dataset, a second one was compiled from the Rio passenger list, called the members of household dataset. This dataset is limited to information on names, sex, age, relation to the head of the household and religion. Table 1 shows a summary of the information in both datasets.

Table 1. Variables in the Heads of households and members of households datasets, and the registers from which the data are taken

Heads of households dataset, n=36

	Kusel	Muiden	Arnhem	Rio
Name	•	•	•	•
Age	•	•		•
N members of household	•		•	
Former residence	•	•	•	
Occupation			•	•
Religion				•
Literacy			•	
Assets	•			

Members of households dataset, n=169

	Kusel	Muiden	Arnhem	Rio
Name				•
Sex				•
Age				•
Relation to head of household				•
Religion				•

For the first dataset, merging was complicated by a number of issues. First of all, spelling variations of the names caused a problem. Both the Dutch and the Brazilian authorities sometimes registered names phonetically, causing some minor differences between last names. In addition to this, in the Rio de Janeiro list, all German first names were translated into Portuguese, causing Johann Kuntz to be spelled as João Koons.

More troublesome was the fact that a person was sometimes categorized as a member of a household in one list and as an independent person in another. This happened, for example, with adult sons and servants of the household. For example, Johann Gilcher was listed in the Rio de Janeiro passenger list as a member of the household of Jacob Walter (he was the servant of the family), while he was mentioned in the Muiden register as an independent single person. In the Muiden register, dressmaker Daniël Samsel was noted down as the head of a household of eight people,

while six of these actually formed a separate household, headed by the widow Philippina Böber, who was his sister-in-law.

Finally, merging the data registers into the first dataset was made difficult by the fact that not everyone appears in all registers. In part, this is caused by the incompleteness of the registers: in the Kusel as well as in the Arnhem list some persons were not recorded, while in the Muiden list some were registered twice. As well as this, several people were born or died during the journey, which also caused some people not to appear in all lists. Although most of the births and deaths could be traced in the Dutch archives, it is not 100 percent certain that all the people who actually left the Palatinate in November 1827 and arrived in Santos in July 1828 are included in the merged dataset.

RESULTS

DEMOGRAPHIC CHARACTERISTICS OF PALATINE MIGRANTS, 1827

Household type

Of the Palatine migrants, the average number of persons per household was 4.7, with a minimum of 1 and a maximum of 10. Almost all households were of the nuclear family type. 29 Households (81 percent) consisted of a father, a mother and a varying number of children. Although two of these households were missing either a father or a mother, and therefore might have been counted as single-parent households, these households were counted as belonging to the nuclear type as well, because the father or mother had died during the trip. Two households were extended and included a relative (a niece or a mother-in-law). As well as these, there were five single people, with one of them having a family relationship with another household in the dataset.

Sex ratio

Considering that the nuclear family was the main household type in our dataset, it will come as no surprise that the sex ratio was 1:1. If we take into account that, in the same period of time, the sex ratio of immigrants to the United States between 1820 and 1830 was 3:1 (Gasso & Rosenzweig, 2006), it becomes clear that migration to Brazil was much more family-driven.

Age

Ages of the migrants varied from 0 years up to 60 years of age. The eldest, Johannes Hopp, died during the trip; four children were born on the way. There were as many babies and toddlers within the group as there were teenagers. The mean age of the heads of households was 39.1 years; the mean age of all migrants together was 21.0 years.

SOCIAL CHARACTERISTICS OF PALATINE MIGRANTS, 1827

Religion

Although most people in Bavaria were Roman Catholics, in the Palatinate, and especially in the northern part of the Palatinate where the migrants came from, the Lutheran religion was dominant. According to the Bavarian 1820 census, 55 percent of the people from the Palatinate were Evangelical Lutherans, 43 percent Roman Catholics and two percent Jews (Rudhart, 1825). The religious affiliation of the migrants reflects this distribution to some extent: 25 (69%) households were registered as Lutheran, while 12 (31%) households were Roman Catholics. This finding is in accordance with the notion that, in contrast to emigration in the seventeenth and eighteenth centuries, religious oppression had ceased to be a major driving force in the nineteenth century (Fertig, 2000).

Occupation

Historians are not in agreement regarding the professions that the migrants followed before they left. Some (Roche, 1959; Schmahl, 2009a) emphasize that mainly poor, unskilled agricultural laborers crossed the Atlantic, because the work they were supposed to begin doing there would be farming. Others (Blancpain, 1974) claim that it was mainly artisans and craftsmen who left. The Palatine heads of household dataset suggests that both were more or less right. Of the 38 heads of households, 18 percent were farmers, 27 percent were unskilled laborers (miners, lime breakers and day laborers) and 55 percent were craftsmen such as cartwrights, dressmakers and carpenters. The Rio passenger list registered most of them as farmers ("lavradores"), but this had more to do with the expectation that all migrants would end up as farmers. This turned out not to be the case, however. The Santo Amaro colony did not become the thriving agricultural village that it was set up to be (Wagner, 1995).

Literacy

The Brazilian authorities were keen to attract German migrants not only because they spoke the same language as their empress, but also because they were more educated and trained than the indigenous people who lived in the south of Brazil at that time. It is indeed true that at the beginning of the nineteenth century, German educational levels ranked among the highest in Europe, but there were sharp differences throughout the German countries. In Prussia, for instance, compulsory education had been introduced as early as 1707, its introduction in Bavaria following almost 100 years later (Liedtke, 1993). However, it should be noted that the German compulsory schooling laws were nothing more than declarations of intent and were not enforced. As a consequence, according to Allen (2011), in 1800, only a minority (35 %) of the adult population in Germany were able to sign their names.

Apart from differences between German countries, there were differences between Lutherans and Catholics and between town and countryside. In the Eifel, north of the Hunsrück, violent protests by the rural population against children's attendance at school repeatedly occurred in the first half of the nineteenth century.

It may come as a surprise that our group of Palatine migrants showed high levels of literacy, which exceeded the overall literacy levels found in Bavaria. 22 (79%) of the 28 heads of households who signed the Arnhem deed were able to write their name. To some extent, this may have to do with our migrants being predominantly Lutheran by religion, compared to the majority of Bavarians who were Roman Catholics, but this cannot be the only cause. The Roman Catholics migrants do indeed exhibit a literacy percentage that was somewhat lower (70%) than Lutherans (83%), but the percentage was still considerable. Age made no difference, either: the mean age of both literates and illiterates was 39 years. It seemed that illiteracy was related to occupation: the dataset shows that almost half of the unskilled laborers were illiterate, whereas all but one of the skilled laborers could read and write. It may very well be that the impact of the general compulsory education for girls and boys which the small Duchy of Palatinate-Zweibrücken (which most of the Kusel district had been part of until 1792) had introduced in 1592 (the first territory in the world to do so) still had an effect well into the nineteenth century (Konersmann, 2005).

Wealth

The datasets do not mention why people wished to migrate. However, there are many other sources containing sufficient information on this subject for us to be able to say something about this. For instance, the archives of Landkreis Kusel contain hundreds of applications for an *Auswanderungserlaubnis* that were written by inhabitants of the Landkreis in the first half of the nineteenth century. Most of these applications refer to poverty as the main reason for emigrating. Of course, the economic situation in the Palatinate triggered emigration, for instance in 1816 and 1845, when harvests failed and people fell into poverty (Schmahl, 2009b). But
328 one may wonder whether poverty really was the only reason for emigration in 1827. When the Württenberg ministerial under-secretary Friedrich List surveyed the reasons for migration in 1817, he noted that people moved above all because they experienced lack of freedom and felt like "serfs in their own country" (Focke, 1976, p. 67). It may therefore very well be that many Palatines, being convinced that poverty was the only basis that the authorities would accept for issuing an exit visa, had exaggerated their financial distress.

The Kusel list gives us the opportunity to get an idea of the financial well-being of the Palatine families who departed for Brazil. As has been stated before, the wealth of only 22 of the 36 households has been recorded in the Kusel list, which may have been due to a lack of interest on the part of the authorities in families with no capital at all, thus causing a bias towards families who did have a certain amount of money. Perhaps due to this bias, only three of the 22 families were registered as being 'impecunious'. All others did have financial assets, either in cash or in the form of property (a house and goods). All but one sold their home, first of all to clear their debts, and after that in order to have enough cash to pay the fare. Houses and goods were auctioned or sold at an average of 436 guilders, ranging from 85 guilders to 1,300 guilders, of which on average 137 guilders (from 0 to 400 guilders) were taken with them to provide for the trip. If we take into account that in the Palatinate skilled laborers earned between 80 and 120 guilders a year (Klose, 2006), it becomes clear that most migrants possessed considerable financial capital and cannot therefore be considered as being poor.

Die andere Heimat is an epic movie, painting a very convincing picture of the conditions under which people in the south-western German countryside, in the first half of the nineteenth century, tried to shape their life scripts on the eve of economic, social, demographic and political modernization. Migration across the Atlantic was one of the options they could consider; migration to Brazil became an interesting option from 1822 onward. But when the *Auswanderungsgeschichte* of the movie is compared with a history of actual German migration to Brazil in the first half of the nineteenth century, some elements in the story appear to diverge. The year 1842, the moment of migration in the film, is poorly chosen, because in that period the previous special advantages of migration to Brazil, such as a free crossing, were abolished and new privileges were only re-introduced after 1845. As a consequence, migration had stalled in the period 1830-1845. Also, the social and economic conditions in the southwest of Germany in those years were not of such a nature that they should have given rise to large-scale emigration. A more important difference between fact and fiction is that, in the movie, emigration is presented as the choice of single families and individuals. In reality, however, those who migrated formed a close-knit group of households which lived close together, were often related, and defined themselves as a *colony* already at the start of their journey. What is also not in line with our results is that the migrants in the movie were predominantly poor and illiterate. Most migrating households in our sample had sufficient capital to settle their debts and pay the fare for the crossing themselves. In addition, the vast majority of the heads of households were well educated and able to sign their names.

All in all, one can say that the image outlined in *Die andere Heimat* is not completely in accordance with historical reality. On the other hand, though, the movie is very convincing as a story about how and to what extent ordinary people could shape their lives in the past. From this perspective, we can only agree with Engelen's opinion that *Heimat* is the best introduction that students can receive in the domain of economic, social, and demographic history.

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1. Landverhuizerszaak van Gieseke & Co. te Amsterdam en Bouricius te Arnhem, 1828-1834.
2. Stukken betreffende de doortocht en het vervoer van landverhuizers naar Noord- en Zuid-Amerika, 1817-1899
3. With special thanks to Friedrich Hüttenberger, who allowed me to use his extended digital version of the Kusel register.
4. Auswandererakten, 1828. Number of heads of households: 37 (22 on the Alexander).
5. Landverhuizerszaak van Gieseke & Co. te Amsterdam en Bouricius te Arnhem, 1827-1836. Number of members of household: 444 (169 on the Alexander); Number of heads of households: 89 (36 on the Alexander).
6. Notarieel Archief J. Nijhoff te Arnhem, 1828). Number of heads of households: 28 (28 on the Alexander).
7. Number of members of households: 169 (169 on the Alexander); Number of heads of households: 36 (36 on the Alexander).

[4]

ANGELIQUE JANSSENS & EVELIEN WALHOUT

Gateways of disease?

Do port cities have different cause-of-death patterns compared to other cities, the case of the Netherlands, 1875-1899

INTRODUCTION

In his long career in academia, Theo Engelen published on a wide range of issues in the field of historical demography. In his PhD, he worked on the intriguing topic of the marked delay in the decline in fertility in the southern predominantly Catholic province of Limburg as opposed to the rest of the Netherlands (Engelen, 1987). In the course of his work on this topic he developed a conceptual framework centered on motivation for and acceptance of modern reproductive behavior, concluding that Catholics in the southern province of Limburg were slow to accept modern fertility behavior due to the working of a 'filter', their religious beliefs. In his role as one of the two project leaders responsible for the Dutch-Taiwanese research project *Life at the Extremes*, he furthermore published on topics such as marriage, fertility and mortality. In this project, researchers challenged and strongly nuanced the assumed opposition between the demographic systems in historical Europe and China and Taiwan in a series of four volumes (Chuang, Engelen & Wolf, 2006; Engelen & Hsieh, 2007; Engelen, Shepherd & Yang, 2011; Engelen & Wolf, 2005). For instance, in one of his contributions to these volumes, Engelen contradicts the old idea that Chinese societies in previous centuries were characterized by higher mortality loads for adult females as opposed to adult males. Engelen finds that this so-called excess female mortality could be found in the nineteenth-century Netherlands rather than in Taiwan. In this article for the celebratory volume honoring the work of Theo Engelen, we also focus on the history of mortality and the transition in health from death due to infectious diseases to death from old age and lifestyle diseases. In recent years, important new types of cause-of-death data have become

available which, together with the movement to build large international databases, will in the near future enable valuable cross-country comparisons in one of the great revolutions of our time: the health transition. This article reports on one such research project and attempts to test some of the main assumptions underlying it.

SHIP

In 2017, the research network SHIP (Studying the history of Health in Port cities) was established. SHIP is a network of scholars studying the dynamics of health and mortality change in port cities across Europe in the nineteenth and twentieth centuries. At present, the network incorporates the following port cities: Amsterdam, Antwerp, Bergen, Bilbao, Cadiz, Copenhagen, Dubrovnik, Glasgow, Hermoupolis, Ipswich, Lisbon, Oporto, Palma de Mallorca, Rostock, Stockholm, Sundsvall, Trondheim and Venice.[1] The network makes use of individual-level cause-of-death data for the entire population of these cities for roughly the period 1850-1950. These datasets are truly unique as they enable us to go beyond what was captured in highly-aggregated national statistics which make use of extremely limited nineteenth-century disease classifications. In this way, we can evaluate health changes in depth, being able to study dis-aggregations, by individual disease, by age, sex, etcetera. We can thus reconstruct the epidemiological 'fingerprints' of European port cities and the way these changed in an exceptional period in the history of European health, in which life expectancy nearly doubled, infectious diseases sharply declined, and cancers and cardiovascular diseases increased.

Why should one study port cities? What makes port cities different from other cities or locations? The network regards port cities in our period of study as unique laboratories which enable us to better understand the long-term global evolution of mortality and health in dynamic environments. We assume that late nineteenth- and early twentieth-century port cities were characterized by high rates of population turnover and by vast economic and industrial change. In that sense, port cities may be seen as prefigurations of the highly mobile and dynamic societies that we live in today. However, port cities were not only hubs for the transmission of people and goods, but also acted as 'gateways of disease' in the same way that airports today function as hubs for the transmission of infectious dis-

eases such as the Ebola and Zika viruses. The assumption here is not so much that migrants are inherently unhealthier than non-migrants. As research has often shown, migrants often had higher survival rates compared to the sedentary part of the population, which has been called the healthy-migrant effect (Puschmann, Donrovich & Matthijs, 2017). Migration was often conditioned upon comparatively higher levels of resources, among which was health. However, that does not mean that migrants could not be ill and be infected with viruses and bacteria, or be carriers of viruses and bacteria, or could be carrying goods which enabled viruses or bacteria to travel. In fact, given that migrants may not have died immediately or at all from their infections at the same rates as the local population, they were excellent vectors in the spread of disease. From this it follows that port cities are also characterized by a particular epidemiological profile which is different from other cities.

In general, port cities may have higher disease loads from infectious diseases, suffer from a larger variety of infectious diseases, and epidemics may be assumed to arrive earlier in port cities than in other cities and result in higher casualties than elsewhere. Sea ports for instance played a major role in the global transmission of the third bubonic plague pandemic, which struck the world between 1894 and 1901 (Echenberg, 2007). Finally, port cities were not only connected across the sea with other ports, they also maintained important links to their immediate and wider hinterlands. Changing health and mortality conditions in port cities might then have an important impact upon demographic and epidemiological change in Europe at large.

In this paper, we will conduct a first exploration of this basic assumption underlying the SHIP network, namely the idea that the (fatal) infectious disease load is higher than in comparable cities which do not function as major ports. The individual-level cause-of-death data on Amsterdam are not yet available; at the moment these data are being computerized through a large crowdsourcing project involving large numbers of volunteers.[2] As a result, we can only conduct our test on the basis of aggregated cause-of-death data at the municipal level which we have for all municipalities in the Netherlands. The great advantage is however that we are actually able to compare the two major port cities of the Netherlands, Rotterdam and Amsterdam, with a small selection of other non-port cities. These community-level data, which will be discussed in a later section, cover the period 1875-1899.

Our research questions are as follows. Firstly, we assume that in port cities the burden of infectious diseases is higher than in other cities. Secondly, we assume that the 'gateway of disease', as compared to other non-port cities, is particularly fatal for those age groups which participate most actively in city life and whose members have higher levels of circulation in the city's economy and in social life. In other words, the burden of infectious diseases in port cities should be higher in particular amongst adolescents, from the age of 14 onward when they start their working life, and amongst adults between the ages of 20 and 50. Thirdly, we assume that these age groups will primarily succumb to airborne diseases which are easily transmitted in the interactions in which people engage on a daily basis. Finally, we also expect a sex difference. In port cities males are likely to have higher circulation rates than females in both the port and the city itself. Ports represent typically male labor markets where males are employed in hauling, loading, ship repair, et cetera, which brings them into close contact with sailors and others entering and leaving the port and the city.

The selection of the two port cities is uncomplicated. Rotterdam and Amsterdam are by far the two most prominent sea ports in the country in the second half of the nineteenth century. Their large size makes them excellent representatives of the new nineteenth-century phenomenon of 'large seaports'. For non-port cities we selected a group of four cities: Utrecht, Groningen, 's-Hertogenbosch and Maastricht. These cities are all medium-sized, as they should be for the purpose of this comparison; they are situated inland in different provinces and regions in the country; they are provincial capitals; and they function as regional markets. None of these four cities are therefore particularly closed off from the outside world. All six cities belonged to the top ten percent of cities in the Netherlands in 1850 in terms of population size, but they are not as large as the two seaports.

In the following sections of the paper we will first discuss the phenomenon of port cities in our period in general and the particular features of the six cities studied here. We will then briefly discuss the epidemiological changes that we expect to see in our study period. After this, we present the data and the methods employed, and finally we present and discuss the results from our exploratory study.

In the nineteenth century world trade expanded vastly, and so did port cities. Whereas at the beginning of the century most countries contained large numbers of towns which could be characterized as ports, by the second half of the century this was no longer the case. With the ever rising volume of quantities traded, only a few ports emerged that could handle these quantities and could meet the demands of the revolution in transportation. As Jürgen Osterhammel (2014) termed it, the nineteenth century is the golden age of *large* port cities. Sea ports in particular grew in significance; linking countries and continents, sea ports came to be the main transmission hubs in the world. The industrial revolution was key

to the revolution in sea shipping and transportation. It facilitated the replacement of wood by iron and later by steel in the construction of ships, and the replacement of sails by steam. Especially from the 1860s onwards, steam shipping reduced the costs of overseas transportation; and the opening of the Suez Canal in 1869 greatly encouraged steam shipping, as the canal could not be used by sailing vessels. By 1900 in the major maritime countries almost 70% of total shipping tonnage was operated by steam, whilst the total amount of shipping of all kinds had also increased. In 1850, 9 million net tons were shipped by the world's merchant fleets, and by 1910 this had risen to 34,600,000 tons (Ashworth, 1975). In the twentieth century, further rapid technological change in sea shipping involved the introduction of oil-burning and motor-driven ships. Sea shipping continued to maintain its dominant position in overseas trade against promising newcomers such as air transport until the middle of the twentieth century.

Some of the existing port cities successfully improved their position by digging ship canals which offered ships easier and quicker access to the open sea. This also applied to Amsterdam which laid out a ship canal in 1825, and Rotterdam which improved its connection to the North Sea through the New Waterway in 1872. This transformed the Rotterdam port into the chief outlet for German products at the time of the rapid industrialization of western Germany. In the period 1880-1910, the city of Rotterdam turned into a 'transit' city (Van de Laar, 2000).

Large port cities in the period 1850-1950 were special worlds, harboring cosmopolitan and dynamic populations with an enormous diversity in its labor market, on the one hand engaged in hard manual labor and on the other in highly skilled financial services or red-light districts. The labor force in port cities was, however, almost entirely male, and most labor in-

volved short-term employment. Major sea ports not only attracted foreigners from overseas, but were also magnets to individuals from surrounding areas looking for work or just waiting to begin their journey on one of the great ocean steam liners to the New World. Major port cities also developed into large urban and industrial centers, not just in Europe but also elsewhere. Overseas trade was an important driver of urbanization and industrialization; in 1850, 40% of cities with a population exceeding 100,000 were ports (Osterhammel, 2014). One of these cities was Amsterdam, and Rotterdam followed soon after 1850.

THE SELECTED CITIES

For this study we selected two port cities, Amsterdam and Rotterdam, and four inland cities taken from the list of the top ten cities in 1850 in the Netherlands: Groningen, Utrecht, 's-Hertogenbosch and Maastricht. These four cities had to be situated inland and also needed to cover the major provinces of the country as well as the north, middle and southern sections of the country. They were also selected with a view to the regional pattern of mortality decline, which will be explained further in the section below. Map 1 shows the location of the 6 cities in the Netherlands.

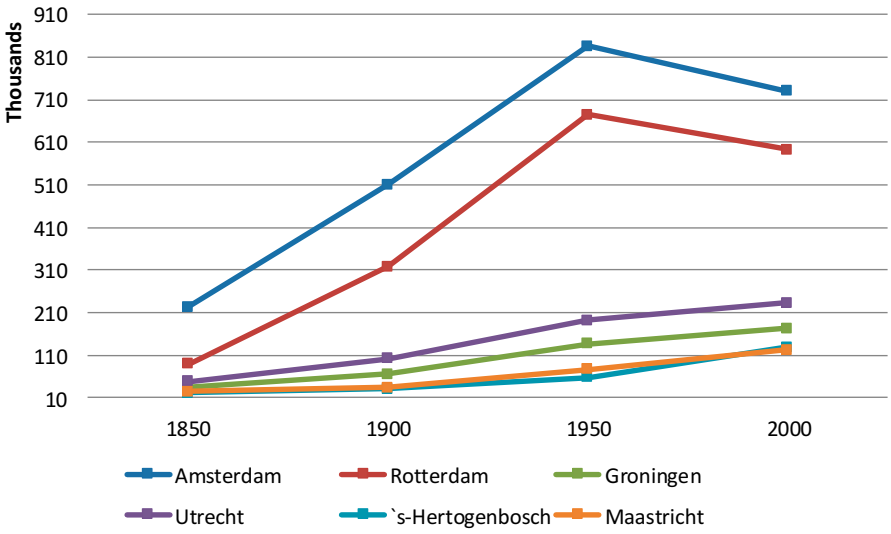
Map 1: The Netherlands and the 6 selected cities

Cartography: Thijs Hermsen, e-Humanities Lab, Radboud University Nijmegen

Figure 1 depicts the population development of the selected cities. The differences between the two port cities and the other four cities are striking. The port cities dominate the urban hierarchy in the Netherlands. In 1850 Amsterdam already exceeded 200,000 inhabitants and expanded at an astonishing rate to a total of more than 500,000 inhabitants in 1900, and more than 800,000 in 1950. Of course, Amsterdam had already been a major port in the seventeenth century, so its position far ahead of Rotterdam should not be surprising. Still, Rotterdam was the second city in the Netherlands in 1850, and fueled by its important function as the major outlet for German industrial products, its population began to rise steeply to more than 300,000 inhabitants in 1900 and almost 700,000 in 1950. What is important to note is that both port cities experienced a turbulent

population development in our study period (Van de Laar, 2000; Aerts & De Rooy, 2006).

Figure 1: Total population in selected cities in the Netherlands, 1850-2000



Sources: Figures for 1850: NIDI (2003); for 1900 figures taken from the 1899 census; for 1950 from: CBS (1950); for 2000 from CBS Statline.

The four inland cities, by contrast, are typically more like middle-sized towns, even though they belong to the ten largest Dutch cities in 1850. All four cities functioned as regional markets for their direct hinterland, and only Maastricht developed into a distinctly industrial center based on the pottery industry. Table 1 shows that total relative mobility was high for

Rotterdam; higher than for Amsterdam, which is the result of its transformation from middle-sized town to the second major port city of the country. Mobility was also high for Utrecht, which, due to its central position in the country and its proximity to Amsterdam and Rotterdam, also functioned as a thoroughfare for people going to and coming to these latter cities, or to other locations on the west coast of the country. Still, Utrecht was able to retain some of these migrants as the city had a positive net migration for all three decades between 1870 and 1900 (see also 't Hart, 2005). Both Groningen and Maastricht were located more eccentrically in the north-east and the south of the country. These cities primarily attracted migrants from the immediate surrounding areas. The city of 's-Hertogenbosch, relative to its population size, had considerable in- and outflows of migrants, but more people emigrated, as the city had a low or even a negative net migration.

Table 1: Relative mobility and net-migration in selected cities in the Netherlands, 1870-1900; ten-yearly average

	Relative mobility			Net migration		
City	1870/1880	1880/1890	1890/1900	1870/1880	1880/1890	1890/1900
Amsterdam	85,7	115,3	107,8	8,7	10,7	5
Rotterdam	109,6	132,6	116,2	14,2	8,3	15
Utrecht	125	125,6	130,3	5,8	8,3	3,3
Groningen	96,5	113,5	119,9	3,1	6	5,4
Maastricht	94,2	103,7	116,1	-2,5	1,8	-4,2
's-Hertogenbosch	136,6	161,2	163,1	-0,2	0,3	2,8

Source: Kooij (1987).
N.B.: Relative mobility is calculated as the total number of migratory movements (in-migration and out-migration) divided by the total population*1000 per year; net migration, as the difference between in-and out-migration.

EPIDEMIOLOGICAL AND REGIONAL MORTALITY CHANGE IN THE NETHERLANDS

We expect port cities to have higher infectious disease loads than cities located further inland which do not have this function of transmission hub for people and goods. However, epidemiological profiles are never static, and particularly in the period studied here we assume important changes to be occurring due to the phenomenon of the epidemiological

transition. The theory of the epidemiological transition, first formulated by Abdel Omran (1971), posits a three-stage change in mortality and disease patterns. The first stage is the Age of Pestilence, in which famines and mortality crises are dominant, followed by the Age of Receding Pandemics in which mortality peaks gradually disappear and life expectancy rises. During the third stage, the Age of Degenerative and Man-Made Diseases, mortality hazards stabilize at very low levels and are primarily determined by diseases associated with old age and lifestyles, such as cancers and cardiovascular diseases. Obviously, the timing of these transitional phases, as well as the pace of change, may vary between continents and between countries. Omran's theory has been heavily criticized, in particular with regard to what extent his framework is universally applicable, but as an analytical framework his theory is still extremely influential.

For the Netherlands as a whole, the major decline in mortality and the disappearance of mortality peaks takes place from about 1875 onward, although for some age groups mortality already begins to decline very moderately from the mid-nineteenth century onward (Van Poppel & Beekink, 2003). Hence, our study period is situated in the middle of the great mortality transition. By way of illustration, between 1840-1851 and 1870-1879 life expectancy at birth in the Netherlands increases by 1 year per decade, and between 1870-1879 and 1910-1920 we see an acceleration to 4 years per decade. This is accompanied by major changes in the pattern of causes of death: deaths due to various infectious diseases decrease, while other causes of death, such as cancer and cardiovascular diseases, become more important. However, the spectacular decline of infectious diseases takes place only after 1900, and before that time, to be more precise between 1875 and 1900, deaths due to infectious diseases do decline but only in a moderate way (Mackenbach, 1992). However, some specific infectious diseases, i.e. typhoid fever, scarlet fever, measles and scurvy, were already declining more sharply from 1875 onward (Wolleswinkel-van den Bosch, 1998).

The major decline in mortality which set in after 1875 also has a specific regional pattern. It first started in the area of the country which until then had experienced the highest mortality levels, namely the western part. This is most visible for infant mortality patterns. During most of the nineteenth century, infant mortality levels had been extremely high in the entire western part of the country, contrasting sharply with very modest levels in the east and the south. This pattern reverses itself when in the final decades of the nineteenth century infant mortality in the south rises

whilst in the west it goes down. The fact that the southern provinces were and still are predominantly Catholic has given rise to an extensive debate on the role of religion in the regional patterning of infant mortality (Walhout, 2010; Janssens & Pelzer, 2014; Van den Boomen & Ekamper, 2015). A similar development applies to the regional pattern of mortality at adult ages. From the end of the nineteenth century onward, this regional pattern settled itself and is still visible today, although in recent decades the southern provinces have been able to reduce the gap between them and other provinces (Van Poppel, 1991).

From the above outline of the epidemiological transition in the Netherlands, we may conclude that the six cities we are studying in this paper are nicely situated in different parts of the historical mortality and epidemiological map of the Netherlands. At the start of the mortality decline around the 1870s, the lowest levels of mortality can be found in the northern provinces, so this applies to the province and city of Groningen, with the western provinces (in which Amsterdam and Rotterdam are located, and including the inland central province of Utrecht and the city of Utrecht) in second place. The two southern provinces in which 's-Hertogenbosch and Maastricht are situated (in North-Brabant and Limburg, respectively) have the highest mortality levels in the final quarter of the nineteenth century (Van Poppel, 1991).

DATA AND METHODS

We make use of community-level aggregates for our 6 cities for the period 1875-1899, taken from the five-yearly cause-of-death statistics at the municipal level for the Netherlands produced for this period.[3] For every five-year period, the Ministry of Interior Affairs required statistics registering the cause of death by age and sex in a nomenclature of 34 different causes of death; see the appendix for the complete list. The following age groups were distinguished: <1 year, 1-4 years, 5-9 years, 10-14 years, 15-19 years, 20-50 years, 50-65 years, 65-80 years, and > 80 years. In addition to the causes listed here, the source also identified the number of deaths occurring in each age group without medical treatment.

Obviously, this source is subject to the criticisms we put forward at the beginning of this article, as we are dealing here with statistics which have been aggregated in the nineteenth century, across years and within communities. The nineteenth-century statisticians putting together these ag-

gregates made use of a historical classification system which we would not use today and which would not fit modern insights into the nature and etiology of diseases. Still, in the history of death and disease, we have to make use of all the historical records available. Moreover, these statistics still provide quite some detail, as they supply us with sex- and age-specific figures for every single community in the country. This facilitates quite detailed analyses across age and sex categories and between regions for a large number of categories of disease.

The causes of death reported in this period had to be certified by a medical practitioner. This became mandatory in 1869, when the Burial Act decreed that a body could not be interred before a doctor had provided the civil registry with a cause of death. All civil registries in the Netherlands had to submit monthly overviews of all deaths by age, sex and cause of death to the Ministry of Interior Affairs. From 1875 to 1900, the Ministry aggregated all these overviews to be published in five-year volumes containing the cause-of-death overviews for all Dutch municipalities. During this period the nomenclature remained unchanged.

One of the aims of the 1869 regulation was to improve the existing cause-of-death registration in the Netherlands, which was considered to be rather unreliable (Van den Boomen & Ekamper, 2015). The unreliability is, for instance, evident from the large numbers of deaths registered as due to unknown causes. Most likely this is a sign that large numbers of deaths occurred without any medical treatment and that doctors did little to identify the cause of death. As a consequence of the 1869 legislation, the quality of the cause-of-death registration increased as evidenced by the rapidly declining numbers of cases without medical treatment or due to unknown causes. For the purpose of this study it is important to underline that for adults these latter two categories were relatively small, suggesting that medical care for adults was mostly obtained from professionals, as opposed to the situation for babies and the elderly. This becomes understandable when one considers the importance to the family economy of adults of working age; families were more quick to call in medical aid and more prepared to spend money on medical care. Nevertheless, the quality of the diagnosis provided by doctors remains controversial. Since the 1865 Public Health Inspectorate Act and the Medical Practitioners Act, the qualifications for medical practitioners were officially defined and only qualified individuals were allowed to practice medicine, after successfully passing an official examination. However, medical knowledge changed

significantly in this period, as did diagnostic and coding practices. We therefore have to remain cautious with regard to the conclusions we can base on these types of data.

In order to calculate cause-specific death rates which take into account the size and the composition of the population by age and sex, we have made use of the censuses from this period (1869, 1879, 1889 and 1899) to estimate the population at risk. Based on two census years, we first calculated the mid-term population, and to calculate the population at risk for each year in between we made use of the mid-term population and the census year. As we are primarily interested in the group of infectious diseases, we grouped the disease categories used in the sources into non-infectious and infectious diseases. We furthermore distinguished between different types of infectious diseases, i.e. food- and waterborne diseases, infectious diseases transmitted by air, and other kinds. We collapsed the 5 periods distinguished in the sources (1875-1879, 1880-1884, 1885-1889, 1890-1894, 1895-1899) into 2 periods: 1875-1889 and 1890-1899. Partly this is to avoid an overload of figures, but it also serves to take into account the underlying trend of mortality decline and epidemiological change. We made use of the classification system developed by Walhout (2010), as shown in Appendix 1.

To study the disease pattern in our selected cities, we first constructed *cause-specific death ratios* by age and by sex, which provide a convenient and simple measure of the relative importance of different diseases in the population (Wilson, 1989, p. 26). This measure provides us with an answer to the question: if people die, what is the type of disease that they die of. Following this, we calculated *cause-specific death rates* by age and by sex, which give us the *risk* of dying of a particular disease for individuals of a particular age and sex. In the following section, we turn to a discussion of the results.

RESULTS

In Figure 2 we present two graphs per city, one panel for each period. The cause-specific death ratios are given for all major age groups. Compared to the distinctions in the sources, we collapsed the age groups 5-9 and 10-14 into one group, and we collapsed the age groups above 65 (i.e. 65-79 and 80+) into one group: 65+. The ratio for each disease category represents the proportion of people dying of that particular disease out of all

deaths in that age group. Hence, the ratios can be read as percentages. We are primarily interested in the two age groups of 14-19 and 20-49 on the assumption that these will be the most mobile and active groups in the city's economy. We may use the data for the other age groups as a reference for the city's general disease pattern.

Let us first discuss the results for the two port cities. Even at a brief glance, it is clear that in both cities and in both periods infectious diseases were the primary causes of death for nearly all age groups. Only deaths occurring above the age of 50 were primarily due to a non-infectious disease, which is understandable as in this age group degenerative diseases were more important, while ill-defined causes such as 'old age' were also frequently registered in this group. For all other age groups, infectious diseases were responsible for the majority of deaths. For infants, one might perhaps have expected that diseases due to water and food-borne infections were the most important killers, but that is not born out by the data; infant deaths are more or less evenly distributed between the three different types of infectious diseases. However, for all other age groups, diseases transmitted by air, such as tuberculosis, are the prime cause of death.

What the data show is that the age group 1-4 years has the heaviest load of infectious diseases. In Amsterdam in each period more than 80 percent of all deaths in this age group are due to infectious diseases, and this applies to boys and girls equally. A more or less similar picture can be seen for Rotterdam, although here initially, in the first period, the proportion of deaths due to infectious diseases remains a little below the level of 80 percent. It is evident that for this very young and vulnerable age group infections are extremely harmful, and other causes of death, for instance deaths due to accidents and other external causes, are not very relevant for this group. We would expect the proportion of infectious diseases to decline between the two periods, all else being equal, but that is not the case. This is perhaps not surprising if we consider the fact that both cities were expanding spectacularly, leading to more crowding and unsanitary conditions in working-class neighborhoods (Waardenburg, 1968; Van de Laar, 2000; Aerts & De Rooy, 2006).

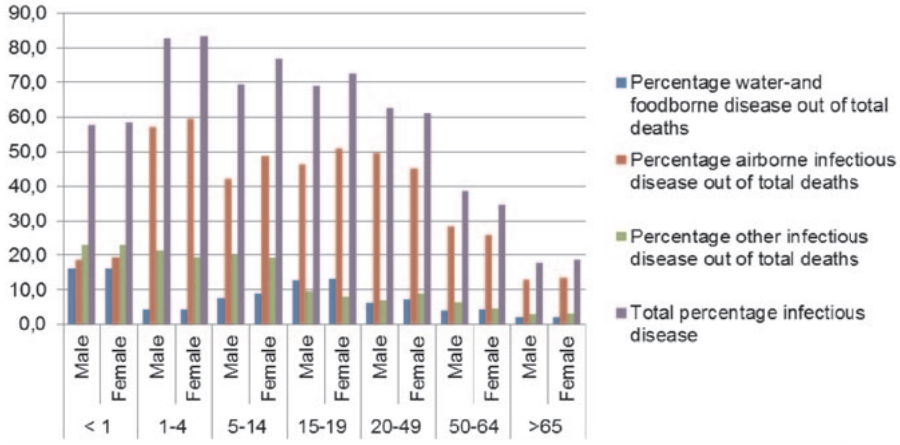
Our special interest, however, concerns the two age groups of 14-19 and 20-49. For the adolescent and adult age groups, infectious diseases are indeed the primary killers, with 60 to 70 percent of all deaths falling in this group of diseases, and within this group the greatest dangers were from airborne infections. Certainly, among the adult group, airborne infections

are responsible for about 50 percent of all deaths. Differences between the two cities and between the two periods are only marginal. It is likely that mortality hazards for these age groups declined somewhat between the two periods, for which we do not have relevant data available here; still, this does not seem to affect the proportional distribution of infectious and non-infectious diseases.

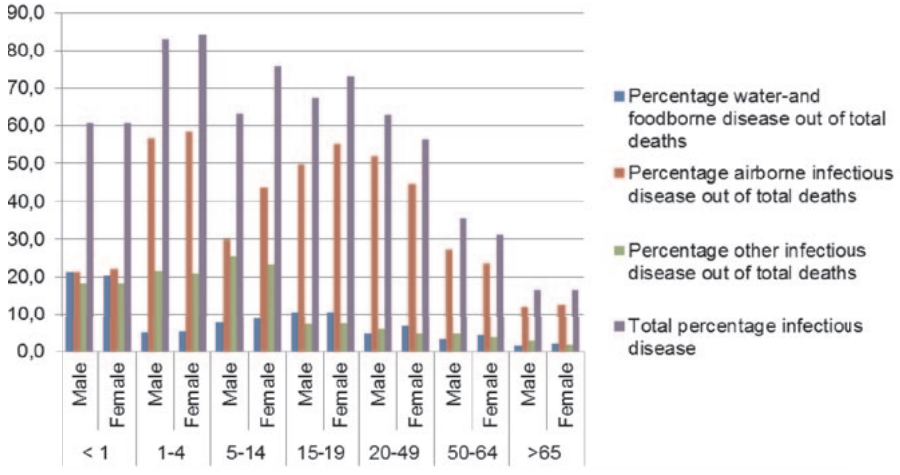
As for sex differences in these age groups, two things are evident. First of all, large differences between the sexes in the proportion of infectious diseases are not visible. Second, inasmuch as differences do occur they are contrary to the expectations formulated at the outset of this study. In the age group of 15-19 we see that females die proportionally more often of infectious diseases than males, while in the adult age group differences between men and women are negligible. The higher proportion of infectious diseases for adolescent girls as opposed to boys may partly be related to the fact that girls were probably less likely than boys to be dying of external causes such as accidents. However, there are also indications that adolescent girls were running greater risks of contracting and of dying from tuberculosis than boys (Devos, 2000). The assumption is that these higher risks for girls are related to a more vulnerable position within households, leading to disadvantages in the access to food and other resources. If the assumption is justified that boys were circulating more outside households in city life in general and in the city's economy in particular than girls, this did not result in higher proportions of deaths of infectious diseases for this group. For the adult age group, there are negligible differences between men and women in the cause-of-death pattern, suggesting that even if we are right to assume that women circulated less outside the household, there were sufficient other ways in which women were contracting these infectious diseases, in particular TB. Among them we may list work-related situations but also conditions within the household, where women were not only primary caregivers for sick and ill household members but may also not always have had sufficient access to food (Janssens & Van Dongen, 2017).

Figure 2: Cause-specific death ratios for Amsterdam and Rotterdam, 1875-1889 and 1890-1899

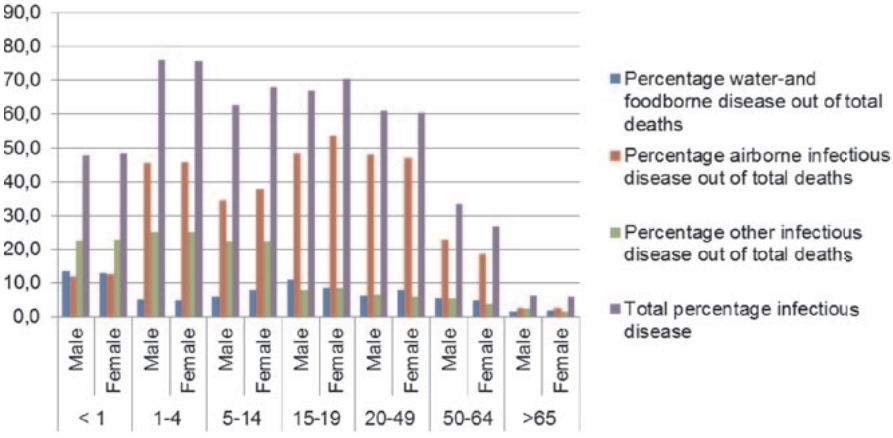
Cause-specific death ratios, Amsterdam 1875-1889



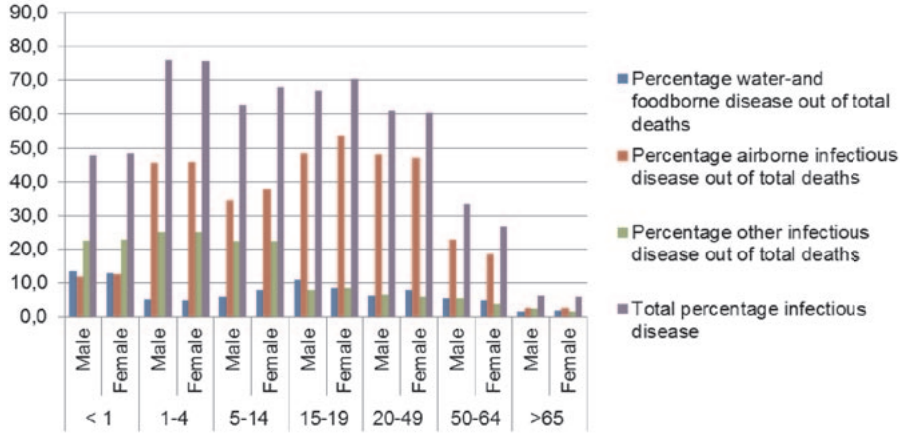
Cause-specific death ratios, Amsterdam 1890-1899



Cause-specific death ratios, Rotterdam 1875-1889



Cause-specific death ratios, Rotterdam 1890-1899



To what extent were diseases patterns in the other cities any different? We will limit ourselves to pointing out the most important differences from the patterns in Amsterdam and Rotterdam. The most prominent difference can be seen for Groningen; here, all ratios fall under the 60 percent level, even in the first period and even for the 1-4 year olds. Only 40-50 percent of all adults and adolescents die of infectious diseases and towards the end of the period this even declines further. There are several ways of explaining this enormous difference. First, diagnostic practices may have been different, with doctors reluctant to register deaths due to infectious diseases. Second, the composition of the population may be different, which diminishes the proportion of people dying from infectious diseases. A closer look at the cause-specific rates may perhaps help to clarify this.

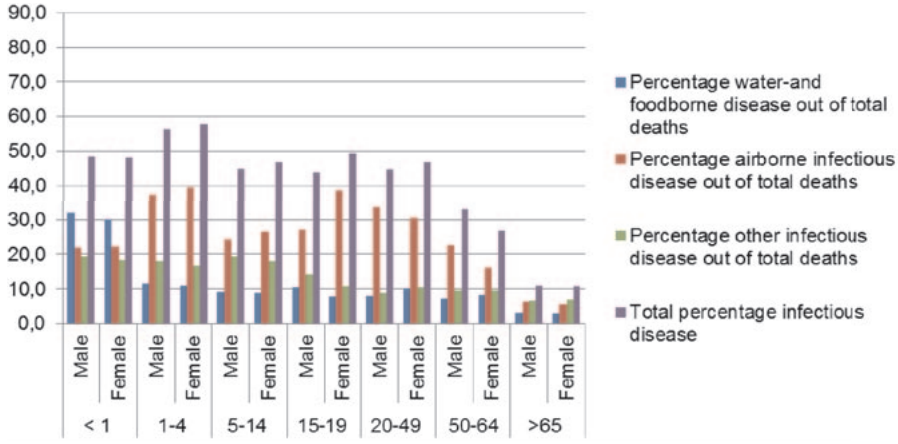
Another important difference concerns the heavy load of infectious diseases for the 1-4 year olds. For these very young children infectious diseases are somewhat reduced in the other cities, especially in the second period, although not for 's-Hertogenbosch. In this city, infectious diseases grew in importance in the second period as the most important cause of death for young children. But for the adolescents and adults in 's-Hertogenbosch as well, infectious diseases constituted as much as 65 to over 70 percent of all causes of death. Utrecht does not display important differences with Amsterdam or Rotterdam; and as for Maastricht, a city with a particularly bad reputation in the field of heath and mortality in the final quarter of the nineteenth century, we find that the load of infectious diseases is more modest than in either Rotterdam or Amsterdam. Therefore, if we focus only on the relative importance of different categories of diseases, we find few differences between the cities, with the exception of Groningen.

Our second step is to consider the *risk* of dying from a particular type of infectious disease. We will do so for three age groups only: the two groups that we are most interested in, namely the 14-19 year olds and the 20-49 years old, with the addition of the 5-14 year olds so that we are better able to judge whether health risks were increasing when children were entering the labor market from age 14 onwards. Figure 4 shows all graphs, one for each city, depicting the cause-specific death rates per 1,000 of the population for three different types of infectious diseases and for all infectious diseases taken together.

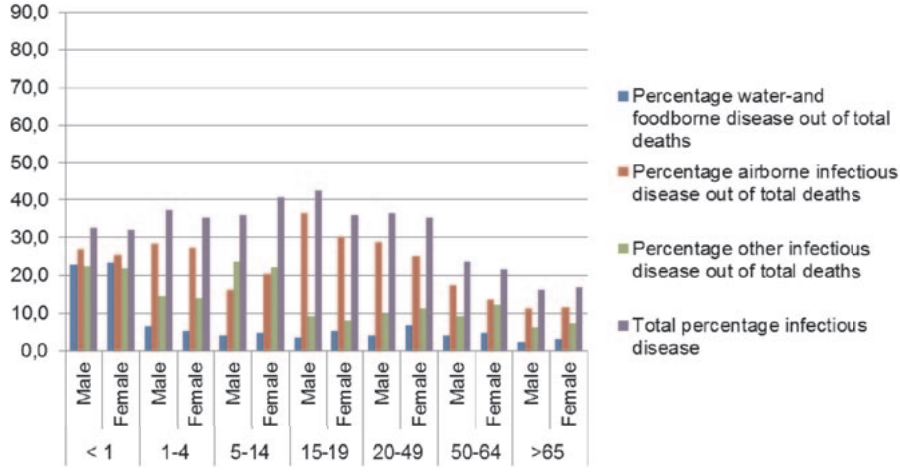
Here, we discuss the most prominent results. We first establish that the risk of dying from an infectious disease increases considerably in the adult age group in all cities. This is still the case in the second period. In fact, the risk of dying from an infectious disease is lowest in the age group of 15-19 years old, lower also compared to children in the younger age group. This contrast with the younger age group diminishes as health conditions improved for children in the age group 5-14 years old. Secondly, the cause-specific rates confirm that in all cities, and in all age groups, airborne infections are the most prominent killer out of all types of infectious diseases. Thirdly, between the two periods all rates decline considerably for both men and women. Health conditions have clearly also improved for infectious diseases. Fourthly, we see prominent differences between the sexes in the adult age group, whereas for all other age groups differences are modest. In the adult age group, men experience very negative health conditions compared to women of the same age. This large difference is primarily the result of airborne infections which carry off many more men than women. This happens in all 6 cities to a more or less equal extent. Fifthly, the exceptional position of Groningen in the death ratios (Figures 2 and 3) does not show up to the same extent. The death rates for the period 1875-1889 indicate that Groningen is mostly in a middling position but there is no indication that the risk of dying from an infectious disease was extremely low as compared to the other cities. However, for the final period it does seem that Groningen is a healthier city for adults, 5-14 year olds and adolescent females. This takes us to the final and central issue: to what extent do we find a clear contrast between the port cities and the other inland cities? For this question we concentrate on the two age groups of 15-19 and 20-49 year olds. The risk of dying from an infectious disease for these age groups is certainly not systematically higher in the port cities. Conditions are much worse in cities such as Utrecht, 's-Hertogenbosch and Maastricht. For adult men in particular, the latter two cities look like true urban graveyards in the years between 1875 and 1889. This enormous health gap for adult men between the two southern cities and the two port cities diminishes in the second period: the two southern cities make a great leap forward in reducing deaths from infectious diseases among adults, women as well as men.

Figure 3: Cause-specific death ratios for four cities, 1875-1889 and 1890-1899

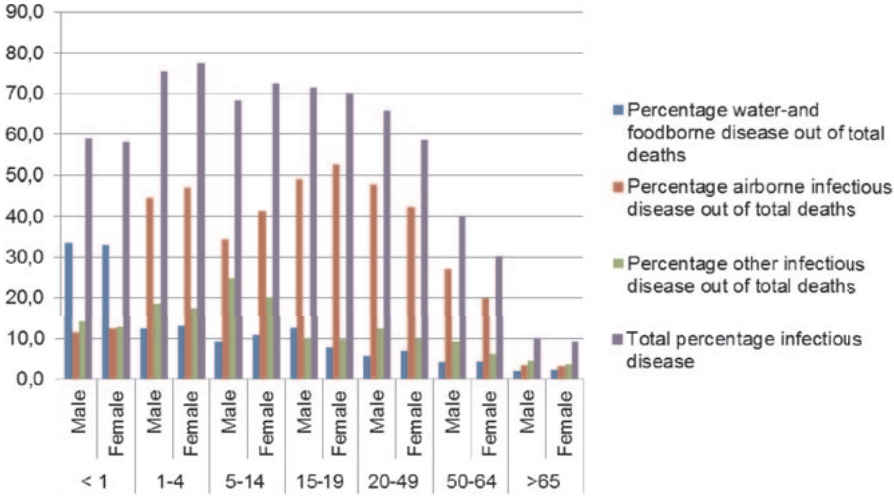
Cause-specific death ratios, Groningen 1875-1889



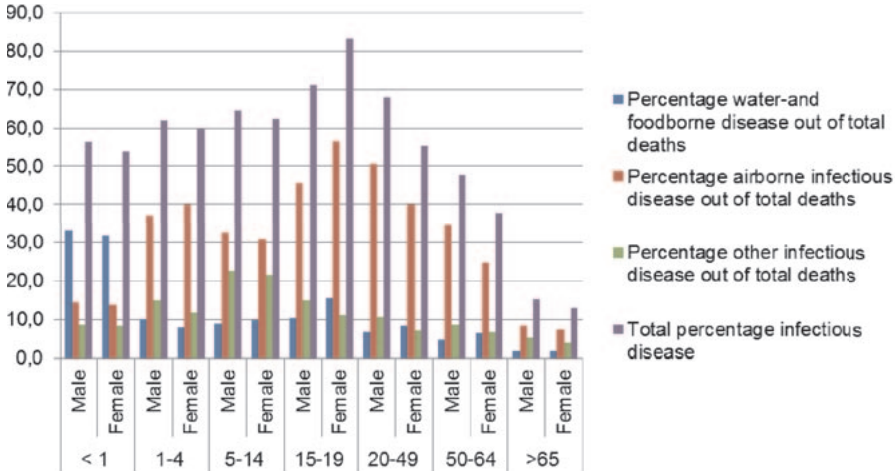
Cause-specific death ratios, Groningen 1890-1899



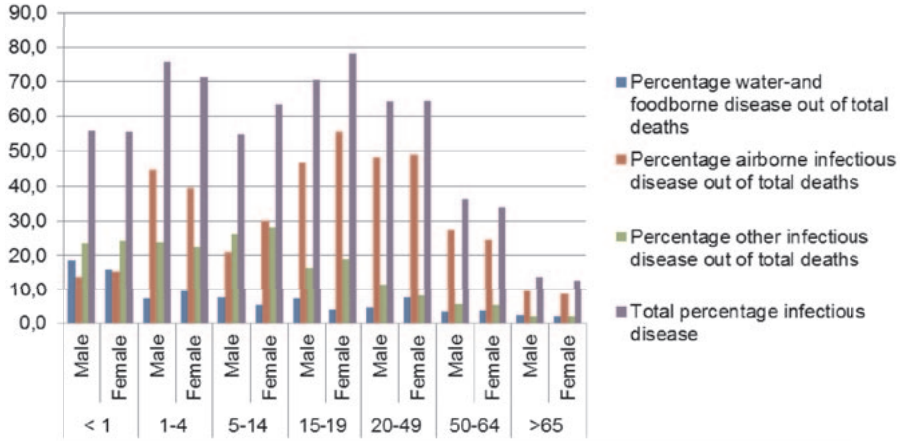
Cause-specific death ratios, Utrecht 1875-1889



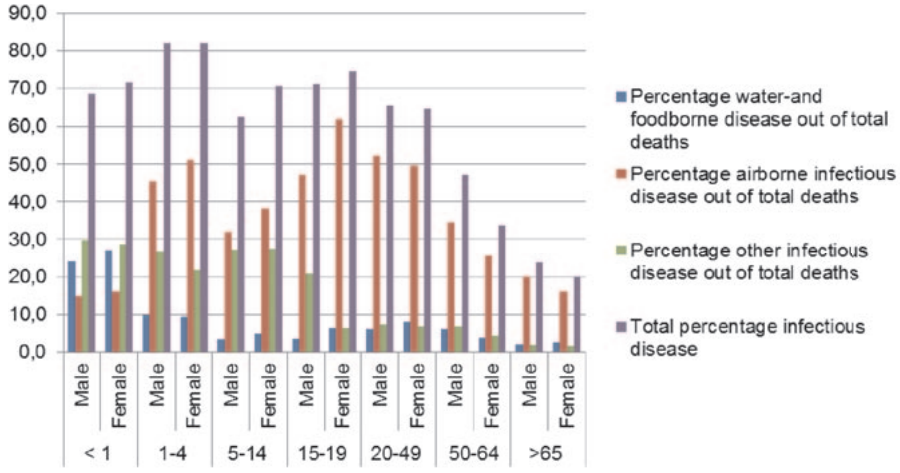
Cause-specific death ratios, Utrecht 1890-1899



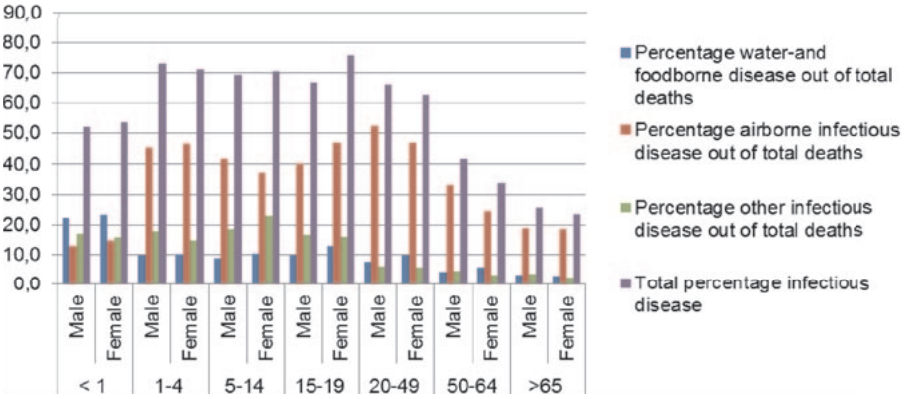
Cause-specific death ratios, 's-Hertogenbosch 1875-1889



Cause-specific death ratios, 's-Hertogenbosch 1890-1899



Cause-specific death ratios, Maastricht 1875-1889



Cause-specific death ratios, Maastricht 1890-1899

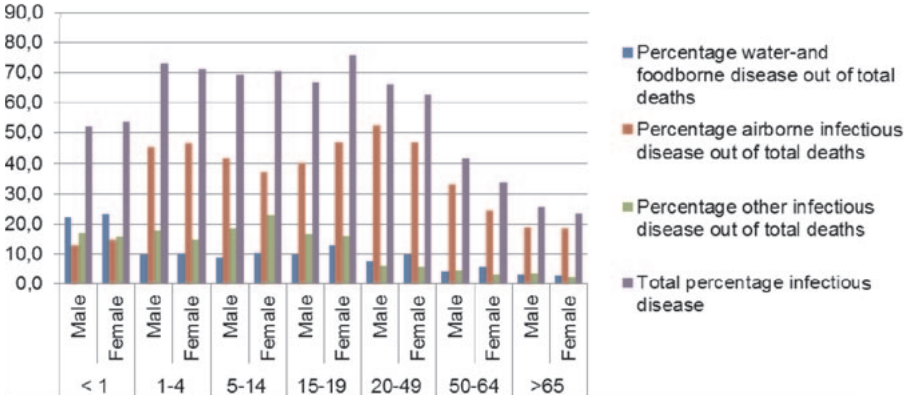
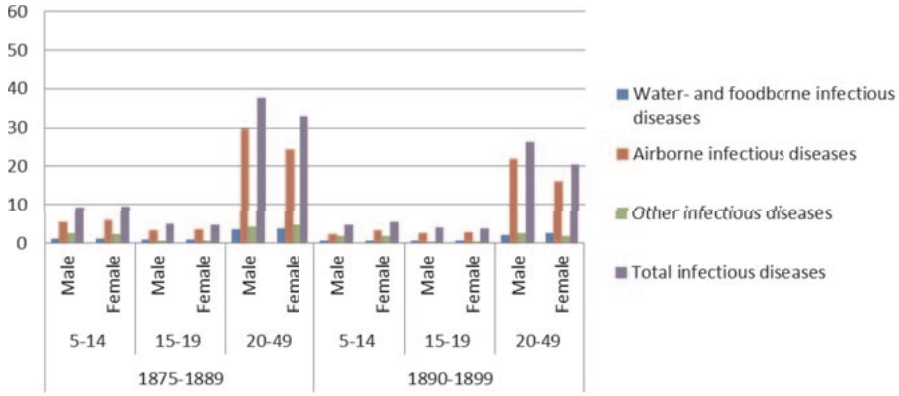
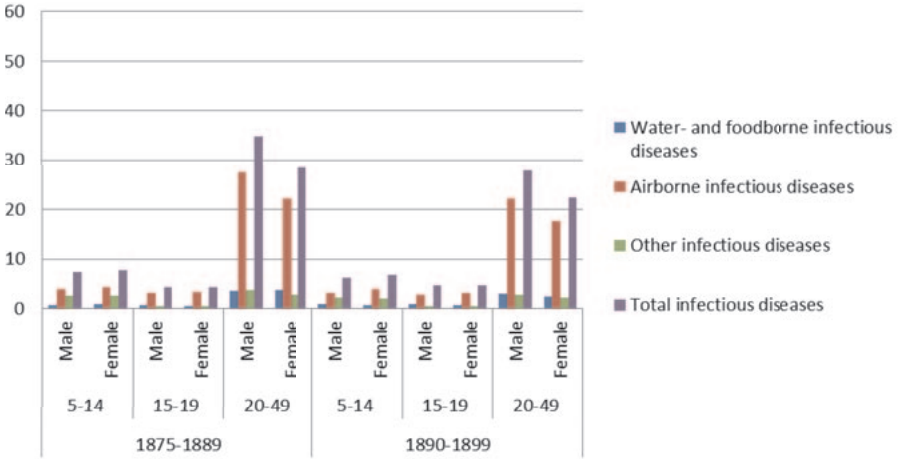


Figure 4: Cause-specific death rates for selected cities in the Netherlands, age groups 5-14, 15-19, 20-49, for the periods 1875-1889 and 1890-1899

Cause-specific mortality rates for Amsterdam, by age and sex: 1875-1889 and 1890-1899



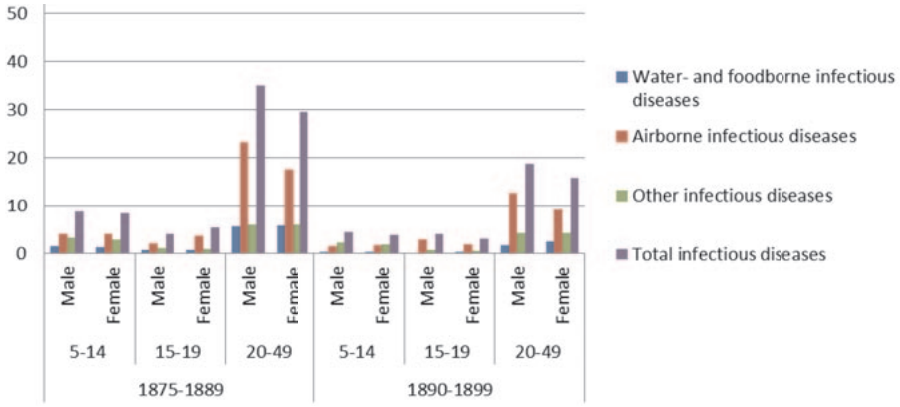
Cause-specific mortality rates for Rotterdam, by age and sex: 1875-1889 and 1890-1899



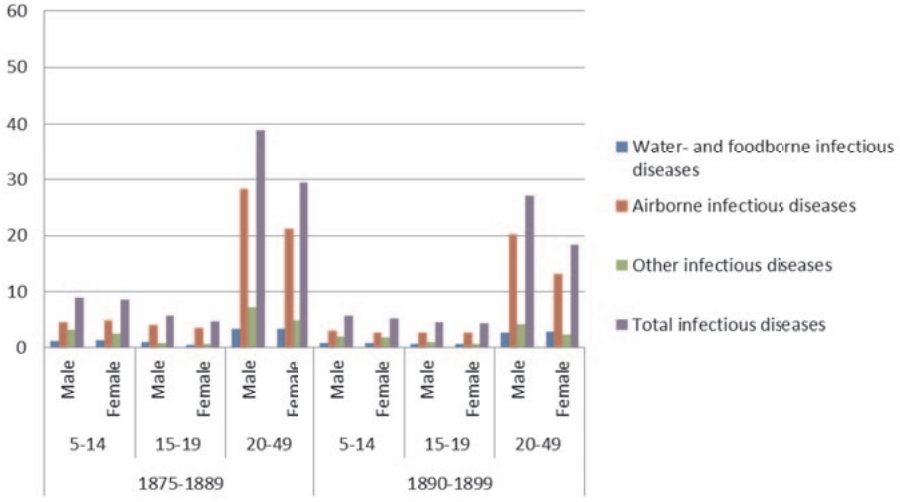
In the final quarter of the nineteenth century, the two large seaport cities in the Netherlands do not carry the largest burden of infectious diseases for adolescents and adults, at least not according to the community-level aggregates studied in this article. The two port cities of Amsterdam and Rotterdam were by far the largest cities in the country, and they also experienced rapid growth and vast economic and social transformations during the period we have been studying. The turbulence generated by this process of change and modernization did not produce health conditions which were extremely unfavorable for adolescents and adults, at least not in a comparative fashion. Some of our expectations were confirmed. For adult men these cities were urban graveyards. The risk of dying from an infectious disease was high for adult men. However, the expectation that the predominantly male labor markets with heavy work conditions in the port cities created higher numbers of casualties amongst adult men, as compared to other urban areas, is not confirmed. Male work and living conditions in cities such as Maastricht and 's-Hertogenbosch were much more lethal in the adult age group. Given the large rise in death risks due to infectious diseases for men between the two age groups of 15-19 years and 20-49 years, it is evident that this is related to men's position in the labor market as the primary breadwinner of the family. We assume that work conditions weakened the immune system, and that the unhealthy and crowded conditions in factories and workshops helped circulate infections. Unsanitary and crowded conditions in the living quarters added to this. Certainly for working class families the quality and quantity of nutritional food was still far from satisfactory, although it was improving in the final decade. Under these conditions, airborne infections were a major killer, with TB as the most prominent airborne infection (Janssens & Van Dongen, 2017).

What are we to make of the conclusion that our two large sea port cities cannot be represented as more lethal than other cities which are not ports? Were port cities not the gateways of disease that we make them out to be? There can be no doubt that port cities were gateways of disease in the final quarter of the nineteenth century. The ongoing traffic of people and goods carried viruses and bacteria into the ports, infecting people in various ways. The higher the circulation, the more risk of people being infected. However, when assessing the results we have seen here, we should bear in mind a number of issues. First, the port cities were not islands unto them-

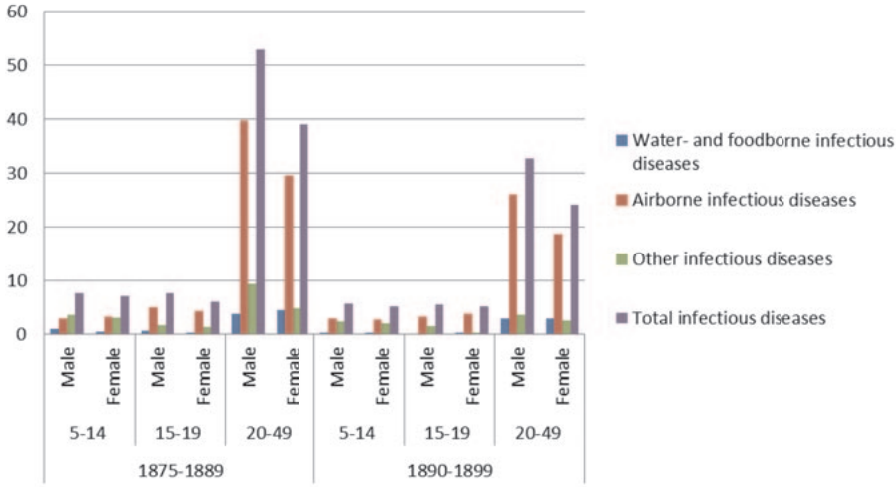
Cause-specific mortality rates for Groningen, by age and sex: 1875-1889 and 1890-1899



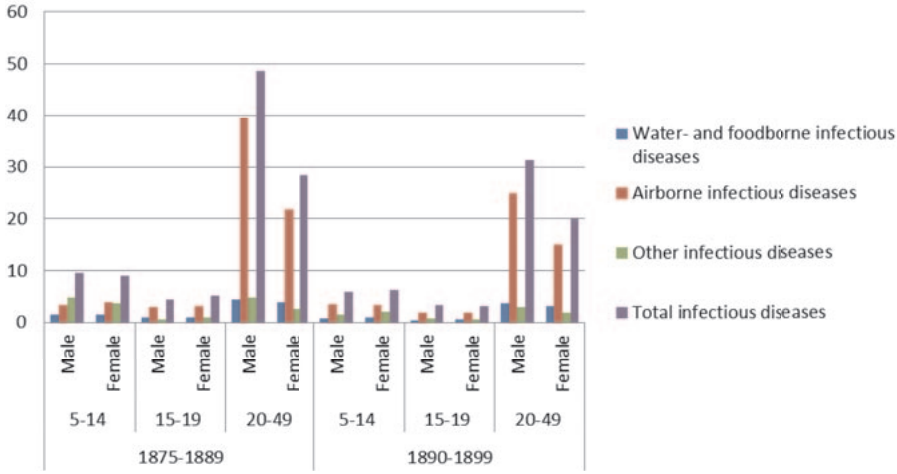
Cause-specific mortality rates for Utrecht, by age and sex: 1875-1889 and 1890-1899



Cause-specific mortality rates for 's-Hertogenbosch, by age and sex: 1875-1889 and 1890-1899



Cause-specific mortality rates for Maastricht, by age and sex: 1875-1889 and 1890-1899



selves. Many people traveled on to the surrounding countryside and most often to other cities. In that sense port cities were true gateways. The four other cities we studied were located at a short distance from the two port cities, in particular Utrecht, so spill-over effects were easy. Moreover, the inland cities were frequently receiving migrants and itinerants traveling over land, for instance coming from Germany and Belgium. Also, for the resident population conditions in inland and non-port cities may obviously be very unfavorable due to other circumstances, such as extreme crowding in walled-in cities, or heavy work conditions in specific industries. City people were by definition rather vulnerable, and this is also true for non-port cities. Furthermore, when assessing the results for these Dutch cities, we should also bear in mind that the two port cities were located in the western part of the Netherlands, where mortality began to decline ahead of other regions, and particularly so in relation to the south and the east. This should produce a dampening effect on mortality risks. If, for instance, people in the west were better fed, they should have better resistance to diseases such as TB. Moreover, these large port cities are not just gateways of disease, they are also gateways through which medical knowledge travels, as well as ideas on urban sanitation. This may produce countervailing effects on medical conditions in these cities. Cities such as Amsterdam were also centers for modern medical knowledge, with relatively large concentrations of progressive physicians such as the Dutch hygienists (Houwaart, 1991). Especially from the third quarter of the nineteenth century onward, this movement gained in expertise and momentum, and also in influence on the city's governors (Aerts & De Rooy, 2006; Van de Laar, 2000).

Finally, a note of caution. The data that we used here may not be best suited to study the combination of type of city and the burden of infectious diseases. The aggregation over time periods and causes of death may hide the behavior of certain infections in these urban environments, flaring up for brief periods and quickly dying down. The individual-level cause of death data for Amsterdam, and for the other ports in the SHIP network, may be better able to show how and where the port cities were either vulnerable or successful in fighting the huge burden of infectious diseases.

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1. For further information on the SHIP project, see: http://www.ru.nl/historicaldemography/research-projects/ship/, or contact: Angélique Janssens (a.janssens@let.ru.nl).
2. For the crowdsourcing project see: http://www.ru.nl/historicaldemography/research-projects/current-research-projects/virtual-folder/amsterdamse-doodsoorzaken-1854-1940/.
3. Source: *Vijfjarig overzicht van de sterfte naar den leeftijd en de oorzaken van den dood in elke gemeente van Nederland*, Ministerie van Binnenlandse Zaken, 's-Gravenhage, Van Weelden en Mingelen, 1882-1901.

APPENDIX 1
CLASSIFICATION OF CAUSES OF DEATH IN THE PERIOD 1875-1899

Congenital malformations

1	Premature births, congenital anomalies

Debility

2	Debility, tuberculosis

Water- and food-borne infectious diseases

7	Typhoid fever
26/26*	Diarrhea, dysentery
27/27*	holera Asiatic, cholera nostras
28	Acute diseases of the digestive system

Airborne infectious diseases

10	Smallpox
11	Scarlet fever
12	Measles
18	Tuberculosis of lung and larynx
19	Croup
20	Whooping cough
21	Influenza, acute respiratory diseases
25	Diphtheria

Other infectious diseases (mixed aetiology)

3*	Syphilis
9,9*	Intermittent fever, pernicious fever
14	Convulsions, trismus, epilepsy
16	Dementia, delirium tremens, acute and chronic brain diseases
17	Diseases of the spinal cord, paralysis
31*	Puerperal fever

External causes

32,32*	Hunger and neglect, burning, violence, suicide by poisoning
33,33*	Drowning, suicide

Other non-infectious diseases

3	Scrofula, rachitis
4	Abscess, ulcer, gangrene
5	Cancer (of the uterus, of the testes, of the digestive system)
6*	Scurvy
8	Continuous fever
13	Other acute skin diseases, anthrax
15	Apoplexy
18*	Coughing up of blood
22	Chronic respiratory diseases
23,24	Acute diseases of the circulatory system, rheumatism, arthritis, aneurysm
29	Chronic diseases of the digestive system
30	Acute and chronic diseases of the genitourinary system
31	Maternal mortality

Unspecified, ill-defined or unknown causes

6	Dropsy
34	Unknown

*Subgroups

[5]

RICHARD PAPING

The 'dynamics' of household structure and size in the Northern Dutch countryside around 1840[1]

INTRODUCTION

After writing my Master's thesis in history on a demographic subject employing a family reconstitution, I drifted away from population history in my PhD thesis, addressing the economic and social history of northern Groningen (Paping, 1995). However, during the last year of my PhD trajectory, I was again drawn towards demographic history due to my involvement in a project inspired by Theo Engelen building on the disputed concept of family strategies (Baud, Engelen & Knotter 1994; Baud & Engelen 1994; Engelen, 2002). After what in the end proved to be quite a lengthy process alongside Ad Knotter, Jan Kok and Eric Vanhaute (and with Theo organizing many things) the results of this undertaking were at last also published in *The History of the Family. An International Quarterly* (Engelen, Kok & Paping, 2004), a journal of which in the meantime Theo had (again!) become associate editor. Since this family strategy project, I have always remained occupied to some extent with questions regarding family and demographic history in some way in the tradition of Theo Engelen, one of the first 'proper' historical demographers that I met in real life.

In this piece, I want to study the structure of households in the Netherlands in the past, a subject that Theo discussed only to a limited extent in his conveniently concise demographic history of the Netherlands during the last two centuries (Engelen, 2009, p. 173-178). I will focus on rural Groningen in the second quarter of the nineteenth century, being part of the Dutch coastal area standing out for its market-oriented economic structure and prosperity as early as the seventeenth century. Considerable urbanization (more than 20% of the population lived in the city of Groningen), specialization, commercialization and proletarianization are the

keywords with which this society can be characterized (DeVos, Lambrecht & Paping, 2011).

It will come as no surprise that such a society with relatively modern (in the sense of 'contemporary') characteristics also exhibited quite 'modern' family relations. The position of females relative to males was, for example, comparatively favorable (De Moor & Van Zanden, 2009). Ages at marriage of males and females were already high in the seventeenth century, and in addition, neolocality was by then the rule, with newly-wed couples usually starting a new independent nuclear household. Just like in early modern England (Laslett & Wall, 1972), most of the people did not live in complex households (Van der Woude, 1972). Complex households are either those which contain three generations, or those in which parents and children are accompanied by relatives such as unmarried brothers / uncles, sisters / aunts or nephews and nieces.

In two famous articles, Hajnal (1965; 1983) connected the prevalence of more complex household structures to the existing marriage pattern (cf. Engelen & Wolf, 2005). Marrying young and usually under the direction of the parents that were still alive resulted very often in the cohabitation of three generations or more within one household. These systems are suggested to have predominantly existed in societies outside Western Europe. Within Western Europe, young people married late and were in general rather independent from their parents (the well-known Western European Marriage Pattern). After marriage, they usually set up households of their own. Three-generation households and other complex households containing relatives other than father, mother and (half) brothers and sisters were scarce. Hajnal (1965) proposed a dividing-line between the two systems running from St. Petersburg to Trieste in Italy. However, the accuracy of this line has been questioned (for instance by Szoltysek, 2015a).

Within Western Europe, it is usually suggested that complex household types, and stem families in particular, are mainly to be found in more traditional and economically backward regions, as for example the stem-family system in the Pyrenean valleys and on highland Norwegian farms (Fauve-Chamoux, 2006). Securing the continuity of a specific house as the socio-economic basis for a family through the generations is presented as the prime force in these systems, where more than one third of the households had a complex character, either by being multiple households (containing more than one married couple) or being extended (comprising extra relatives). In such societies, people living on their own were rare. Even in some comparatively less specialized, urbanized and commercial-

ized Dutch inland provinces, a high incidence of complex households can be found. Slicher van Bath (1957) observed in Salland (Overijssel) that 31% of households had a complex character in 1749. In Havelte (Drenthe) in 1829, about 24% of the households had a more complex character, though this applied only to 45% of the farmer households, while only 10% of the laborer households were of this type (Verduin, 1972).

Table 1. Some samples of household structures in the Netherlands before 1850

	N	% three-generation households	Other extended and multiple households	% total extended and multiple households
Overijssel 1749	7,763	13.9%	6.6%	20.5%
Drenthe (sand) 1829-1849	ca. 2,000	-	-	ca. 24%
West-Brabant 1800-1829	3,877	ca. 4%	ca. 6%	ca. 10%
Veluwe countryside (Gelderland) 1749	3,917	4%	3%	7%
Veluwe towns (Gelderland) 1749	2,715	2%	3%	5%
Holland 1622-1795	3,198	<1%	-	3.6%
Friesland (1 village) 1744	400	4%	4%	8%
Groningen clay area 1829-1849	3,306	6.5%	3.6%	10.1%

Sources: Van der Woude, 1972; Slicher van Bath, 1957; Roessingh, 1965; Verduin, 1972; Klep, 1973; this publication.

As can be proven for the sandy Veluwe and western North-Brabant, complex households in other parts of the inland and less modern provinces are rather uncommon. So in the largest part of the Netherlands, extended and multiple households formed only a maximum of 10% of all households, with about half of these usually comprising three generations (Table 1). Although further investigation seems necessary, the relatively high figures for both the Groningen clay area and a few municipalities in rural Drenthe suggest that the proportion of complex households, and especially three-generation households, seems to have risen around 1800.

This proposition finds support in the data from the Historical Sample of the Netherlands (HSN) regarding Dutch inhabitants born in the nineteenth century showing fairly high proportions of complex families everywhere in the Netherlands (Kok, Vandezande & Mandemakers, 2011). A similar development towards an increasing proportion of extended households also took place in nineteenth-century England and the United States (Ruggles, 1987).

As mentioned before, complex family households are usually seen as having a function in securing the continuity of the family household, which of course was of more importance for farmers than for laborers. On the one hand, the next generation did not have to postpone their marriage until the death of both parents for a regular livelihood. On the other hand, the parents could spend their last years in their house, having assured themselves of the necessary care and help in the family enterprise. Implicit in this reasoning is that the prime family aim was the continuity of the family on one specific farmstead through the generations. It has been suggested that such continuity was fairly common in the eastern parts of the Netherlands (De Haan, 1994), just as it was in the adjourning German inland regions (Schlumbohm, 1994; Fertig & Fertig, 2006), and may be related to the existence of a stem family system (cf. Das Gupta, 1999). However, in both rural Groningen and Drenthe, family succession on farms was of far less importance (Paping & Karel, 2011).

Non-nuclear household structures were not completely absent in the modern Dutch coastal region, as the 10% of cases found in our database of 3,306 households in the Groningen clay area in the first half of the nineteenth century show. Here, I want to address the following questions while analyzing this Groningen database. To what extent was household structure and size connected to welfare, occupational group or the age of the head of the household? Can existing extended and more complex household structures be connected with a desire to ensure the continuity of the family household over the generations (family succession) in certain branches of society? Or were these household structures mainly solutions for diverging temporary (housing and economic) problems of newly-wed couples and the elderly?

Probably the biggest problem that newly-wed couples faced in the past was where to live. Two partners, usually living separately, had to decide on a joint place to live, taking into account their resources, at least in cases where they had the social-cultural freedom to make this decision for themselves. The problem of residency was one that everyone faced; however, they usually had the option of remaining where they lived. Nevertheless, in these cases there are also clear moments that there was a necessity to change residence.

It is important to ask the question of why do people live together in one house. Several important and partly related reasons can be discerned:

1. Marriage and reproduction: usually bride and groom live together.
2. Parental care: usually young children are living with their parents.
3. Care for the physically vulnerable and disabled: some (elderly and disabled people) cannot take care of themselves and consequently have to live in a household with others (cf. Wall, 1995). On the one hand, care given by relatives to, for instance, young children might also be beneficial (so-called cooperative breeding). In a way this can result in "relationships of mutual assistance or reciprocity" within a household (Chudacoff & Hareven, 1978, p. 240). However, part of such care can also be supplied by relatives living nearby.
4. Economic vulnerability: some people do not have the resources to run a household of their own; they are partly economically dependent on others for their livelihood (Laslett, 1988).
5. Higher productivity and / or production: Servants can work more efficiently when they live in their master's house. This is of mutual economic interest. Servants earn higher wages, and employers are prepared to pay these wages because of the higher productivity (or perhaps production, inasmuch as live-in servants usually work more hours). For children working in a family business this factor also plays a role.
6. Lack of available houses, due to a housing shortage (cf. Chudacoff & Hareven, 1978): this might have been important, especially in the short term; however, if there are barriers to building new houses, rising population numbers will structurally result in more people grouping together in one house.
7. Economic efficient housing: living together in one house is cheaper. This of course is an especially attractive reason for economically vul-

nerable people. Efficiency might be higher if one has a joint household economy than if one is only sharing the same roof.
8. Affection: people tend to live together because they like each other, others split because they do not like each other (anymore).
9. Norms and customs: strongly enforced social and legal rules might force people to gather in one household. For example, there could be a social rule that young unmarried people should live with family members or with a master; or that newly-wed people move in with the husband's parents. Also, it might be a socio-cultural rule that if one child marries and moves in with (one of) the parents, the other (unmarried) children have to leave the household.

Besides all these reasons for people to live together, one important disadvantage has especially to be mentioned. Living together nearly inevitably results in a loss of personal freedom; the extent is dependent on different private factors. This factor could be the prime reason for couples to naturally tend to strive towards living in independent (nuclear) households (Verdon, 1998). In a capitalistic society such as the Groningen clay region, where the economic independence of each couple was the norm, and where people had no official responsibility for impoverished adults and more distant juvenile family members (Paping 1995, p. 281), the desire to live independently will have been much stronger than elsewhere.

By the way, living together in one house does not have to mean that there is one joint family or household economy (cf. Knotter, 1994). A household economy is in this respect defined as a situation in which people are living together in one unit in which most of the household tasks (cleaning, cooking, eating, caring etc.) are not divided into completely separate and unrelated individual parts. In some cases, different household economies are sharing one house, but they do not have much to do with each other. In situations with unrelated families living in one house, we regard these families as distinct households.

DATASET AND RESEARCH AREA

For the analysis of the household structure and size, data on six municipalities in the Groningen clay area, namely census data from Bedum and Leens in 1829 (middle of November) and Hoogkerk, Uithuizen, Winschoten and Zuidhorn in 1850 (1 January), were employed. These six municipalities together are quite representative for the whole of the 36

municipalities in the Groningen clay area, with about 85,000 inhabitants in 1850. However, it has to be pointed out that one of the two regional centers (Winschoten) was included, what means that these regional centers are over-represented.

The well-known Laslett-Hammel (1974; see also Laslett, 1972) scheme for household structure has been used to group the different households into broad categories (see Table 2), not taking into account the numerous live-in servants and boarders and lodgers. A nuclear family consists of at least two persons (belonging to the categories of father, mother and children), in which at least one parent is still alive and present. In the scholarly literature, such a unit is called a CFU or Conjugal Family Unit. An extended family is defined as a household in which a grandparent or grandchild was resident, but not part of a separate nuclear family unit consisting of at least two distinct persons. In a multiple family household, at least two separate nuclear units (CFUS) can be recognized. A three-generation household can be an extended or a multiple family household.

As the census does not provide all the necessary information for depicting different household economies, we arranged our data using several principles. Related persons in the same house are suggested to have a joint household economy, whereas live-in servants are treated as part of the joint household. However, unrelated boarders and lodgers aged 16 and older who do not work for the family firm were treated as separate economic units, but were always included in the average household size. Single unrelated persons (not being servants) under the age of 16 living in the same house were treated as part of this family economy, and usually reckoned to be stepchildren or foster children. Unrelated families (at least two persons)[2] who were resident in the same house and were not linked to each other in a service relationship were counted as different households. These principles were applied strictly and only caused problems in a few instances of several unrelated persons living together in a poorhouse. If solitary persons were living in a poorhouse, they all were reckoned to be boarders and lodgers of the pauper mentioned first.

The database used provides information on the structure of households at one specific moment in time. Using census data makes it hard to follow the exact structure of individual households over time. Consequently, the dynamics of household structure had to be studied by comparing the average situation of households in different phases of life, using the age of the head of the household as a measuring-rod (Tables 4-7). This cross-sectional method of course only gives an indication of the actual dynamics

in the structure of individual households (Chudacoff & Hareven, 1978). Only for three-generation households in three villages did we look at the situation ten years later to see what happened in the intervening period (Table 8). This small sample already suggests that individual household structures were indeed very dynamic, changing from nuclear to extended and back all the time, due to purely demographic events such as deaths, births and marriages, but also because of the movement in and out of the house of individual household members.

The Groningen clay area was part of the Dutch coastal countryside and although a slightly peripheral region seen from the Amsterdam perspective, its economic structure and economic development resembled quite closely those of rural Holland, Zeeland and Friesland. Differences were more substantial with the inland provinces, where farmers formed a larger group, wage-labor was of less importance and the proportion of artisans and tradesmen was lower. Nevertheless, Groningen had some peculiarities, of which the very strong entitlements of the wealthy tenant farmers on the land have to be mentioned (Paping, 1995).

The Groningen clay area experienced rapid population growth combined with heavy proletarianization from the end of the eighteenth century onward, in line with developments elsewhere in Western Europe. The population rose from 50,000 around 1790 to 85,000 around 1850 thanks to a birth surplus in combination with nearly equal numbers of immigrants and emigrants. As a consequence of the population growth, numerous laborer and middle-class houses were built from 1790 onwards. Between 1790 and 1850 the proportion of farmer households fell from 29% to 17%, while equally the proportion of laborer households rose from 28% to 40% (disregarding household heads without occupation). Consequently, about 43% of the heads of households had their primary occupation in industry and services.

THE GENERAL PICTURE

In Table 2, an overview is given of the different household structures in the Groningen clay area, their composition and average tax position. Simple nuclear families consisting solely of a married couple with or without children numbered 2,057, constituting a majority of the households (62%). However, another 276 married couples could be found within three-generation households, laterally extended family households, and

multiple family households. The number of multiple family households is extremely low, suggesting that there was an implicit socio-cultural rule that could be phrased in the following way: married couples ought never to live in the same house as related married couples. To make this even clearer, it is worth taking a closer look at the 45 multiple households in the database. In theory, such households could comprise two related married couples. However, only 18 out of 45 multiple households actually contained two couples. In one case two married sisters were living together, in fourteen cases a married daughter was living with both her parents, and in only three cases was a married son living together with his father and mother, albeit without having any children (yet).

Table 2. Household structure in the Groningen clay area using a grouped Laslett-Hammel scheme, with indication of the average number of persons per household and the average tax record, 1829-1850

	share	head	children	relatives	servants	boarders	Total size	Aver. Tax	N
Married couple with children (3b)	53.6%	2.00	3.04	0.00	0.57	0.04	5.65	51	1773
Widower with children (3c)	4.2%	1.00	2.90	0.00	0.81	0.08	5.00	59	140
Widow with children (3d)	9.9%	1.00	2.57	0.00	0.38	0.07	4.03	45	328
Married couple without children (3a)	8.6%	2.00	0.00	0.00	0.44	0.06	2.51	47	284
Widowers without relatives (1a1)	1.5%	1.00	0.00	0.00	0.59	0.17	1.76	49	51
Widows without relatives (1a2)	3.9%	1.00	0.00	0.00	0.28	0.15	1.43	40	128
Others living alone (1b-1c)	4.2%	1.00	0.00	0.00	0.63	0.25	1.88	50	138
Relatives living together (2a-2b)	2.4%	1.00	0.00	1.47	0.78	0.16	3.42	53	79
Deviant simple families (3e-3k)	1.5%	1.24	1.67	0.00	0.12	0.08	3.10	32	51
Extended 3-generation families (4a-4b, 4d)	5.4%	1.77	1.97	1.13	0.47	0.06	5.40	50	177
Other (laterally) extended families (4c)	3.4%	1.71	1.96	1.19	0.71	0.04	5.61	58	112
Multiple family households (5a-5e)	1.4%	1.78	1.29	2.91	0.38	0.00	6.36	47	45
Total population	100%	1.70	2.22	0.18	0.55	0.06	4.71	50	3306

The total population of the six municipalities researched was 15,577.[3] In total 3,306 (21%) were the head of a household, 2,320 (15%) were married to the head of a household, 7,337 (47%) were resident children (live-in married children not taken into account), 587 (4%) were other resident family members (including resident married children), 1,814 (12%) were resident servants and 213 (1%) were unrelated solitary boarders and lodgers.

The figures for average household size are not very surprising. Married couples with children, extended family households, and multiple family households were relatively large, although the differences seem somewhat

smaller than expected. It is unsurprising to find that solitary persons, despite having a considerable number of servants, lived on average in the smallest households. Co-resident siblings and other siblings living together did not form large households, although rather unexpectedly they employed nearly the highest numbers of live-in personnel. Boarders and lodgers relatively often lived with other solitary persons.

Local tax records were available to give an impression of the economic position of the households. For each municipality, the households were scaled from 0 to 100 according to their average tax position. The 40% to 60% of households not paying taxes were all given a ranks score of 20 to 30, to certify that the average tax ranks score of all households was logically 50. The households paying the highest local tax received the position 100. The local tax was based on presumed wealth, but in fact was levied quite arbitrarily on something in between net capital and annual income. However, the differences in taxation between the inhabitants were closely controlled by the elected municipal government (cf. Paping, 2010).

Most groups of households had an average tax rank score around 50. Those grouped in deviant household structures, consisting of illegitimate mothers, unmarried couples, divorced or abandoned men and women and others, belonged mostly to the lowest substratum of society. Widows fared poorly in the tax classification.[4] For the rest, only the category of laterally extended families attracts attention as being on average better off. This suggests that the more well-to-do couples had a higher tendency to absorb relatives into their households, and that relatives found wealthier households a more attractive residence prospect than poor households (cf. Ruggles, 2011, who find similar results for the United States in the period 1850-1880, though he connects this to the prospect of receiving an inheritance). The explanation seems rather straightforward. A significant fraction of the lateral extensions comprised young unmarried sons and daughters. In the lower classes, these would go and work as live-in personnel. For the more well-to-do this was not always seen as a suitable alternative, so, if they were orphaned, they would live with relatives. The tax data indicate that the arrangements with three generations or more than one CFU (multiple households) were just as attractive for the rich as for the poor.

In the introduction, it was stated that extended and multiple households are usually connected with farmers, who in this way secured the transfer of the farm to the next generation. Table 3, however, shows that farmers in the Groningen clay area were only slightly more inclined to form complex households (the difference comes largely from the relatively

numerous laterally extended farmer households with resident unmarried brothers and sisters).

Table 3. Occupations and household structure in the Groningen clay area, 1829-1850

	N	% of extended and multiple households	Average size all households	Average size extended and other households	Average tax rate all households	Average tax rate extended and other households
Farmers	537	13%	6.79	7.00	78	80
Unskilled laborers	1,076	9%	3.92	4.86	31	32
Business in industry and economic services	1,145	11%	4.90	5.61	54	55
Female occupations	40	3%	2.08	-	31	-
Other occupations	271	5%	5.00	5.46	62	53
Without occupation	237	9%	2.81	4.57	50	53
Total	3,306	10%	4.71	5.60	50	53

Clearly, farmers had other strategies in the Groningen clay area than in stem family regions. The most important goal of farming was not the transfer of the farm to the next generation, but to make a decent living out of the farm (Paping & Karel, 2011). Handing over the farm to the next generation was only one option, alongside selling the farm, or running it without family help in order to make a living until old age, and avoiding disputes with a son or son-in-law over who was actually in charge of the farm.

Extended and multiple households were relatively rare among the households with other occupations (5%), which is not very surprising taking into account that this group consists partly of skilled workers and partly of civil servants, preachers and physicians; indeed, all households where there were not many job opportunities for a younger generation.

MARRIED COUPLES

At first glance, Table 2 suggests that in the Groningen clay area a majority of couples lived in a relatively simple family of two parents and their children. However, in reality, some of these families were less simple than suggested. Of these 1,773 households, 46 shared a house with another household, another 52 had boarders and lodgers, and out of the rest, 446 had resident personnel, leaving 1,229 households or 37% which truly com-

prised only parents and their offspring. In reality, this proportion is even lower, taking into account the fact that some of these households comprised children from earlier marriages.

Nevertheless, it cannot be denied that in the majority of households the relatives present formed a nuclear household with parents and children. In a further 9% of the households the core was a married couple without children. In some of these households this was only a temporary state of affairs, while some couples were infertile, and others had children who had already moved out. Not surprisingly, the number of married couples living without children rose, especially from age 55 onwards, because children left the household. Nevertheless, about three-quarters of fathers between the ages of 60 and 70 had still at least one child at home. Although these figures seem to suggest a common strategy of keeping an unmarried child at home to take care of the ageing parent, this was not the whole story.

Table 4. Percentage of married couples without resident children, measured against the total of all married couples living in a simple nuclear family, Groningen clay area 1829-1850 (male age groups: N=2,057)

	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71+
% without children	24%	18%	10%	9%	6%	15%	10%	18%	28%	26%	59%
N	58	265	367	315	297	239	189	153	103	39	32
Children	1.08	1.69	2.47	3.06	3.58	3.11	2.89	2.48	1.61	1.95	0.78
Servants	0.19	0.52	0.61	0.67	0.51	0.64	0.46	0.44	0.46	0.77	0.66
Household size	3.27	4.26	5.13	5.77	6.13	5.77	5.38	4.99	4.09	4.72	3.53
Tax position	41	45	47	50	54	53	52	53	57	63	52

Table 4 seems to imply that the small group of fathers and mothers above 70 usually lived without off-spring around. However, for this group of married couples who reached a very high age, living in a more complex household also became very important, as table 5 shows. Out of the husbands aged over 71, more than a third lived in such households. The problem for the majority of these old couples was that none of their children were unmarried by this point. In this situation there were only two solutions: 1.) trying to survive in a household without children, which must have been unattractive because manpower and earning capacity was in short supply; 2.) choosing living arrangements with relatives other than unmarried children. In the majority of the latter cases the old couples lived with grandchildren, widowed sons or daughters with their children, or

daughters and illegitimate children. Only a minority indeed cohabited with a married couple of the younger generation. In the whole database only 17 cases were reported in total, pointing at the fact that this was a very uncommon strategy (see also later on).

Table 5. Household position of all complete married couples Groningen clay area, 1829-1850 (male age groups: n = 2,333)

	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71+
Nuclear family with children	55%	67%	77%	81%	87%	80%	85%	77%	66%	64%	27%
Nuclear family without children	18%	15%	8%	8%	6%	14%	9%	17%	22%	22%	39%
Extended or multiple household	23%	17%	15%	11%	7%	6%	6%	6%	12%	13%	35%
N	80	321	430	352	321	254	201	163	117	45	49

For newly-wed couples, living in extended or multiple households was also a rather common phenomenon. They often lived with a widowed mother or father, or an unmarried brother or sister. In particular, very young couples were often not able to set up a nuclear household immediately. Also, for couples marrying around the usual age of 26-30, living with one of the parents was not uncommon for a particular period in life. Later on in life, most of the couples would no longer be living with resident relatives, although this effect can partly be explained by the death of the resident surviving parent. Clearly, living in a complex household was a stage that couples passed through during their lives, happening mostly directly after marriage and in old age. Although most of the couples were able to escape from it, for many very young and very old couples it was a practical means of providing their main requirements (housing and care, respectively).

It must not be forgotten that one-third of these married couples did not live in a three-generation household, but shared living space with brothers, sisters, nephews and nieces. Presumably, these couples did not necessarily only solve their own problems, as these relatives could contribute to the household economy, but also solved the housing and care problems of their live-in relatives. The same will have been the case for married couples living with an old parent or a very young grandchild.

It is interesting to speculate about what happens, all else being equal, when adult mortality falls and people marry younger. Logically, in this case, the proportion of complex households will rise. On the one hand, a fall in the age at marriage will reduce the number of unmarried children available to share a household with their parents once they reach their

seventh decade, which results for the parents in an unattractive nuclear household without children, manpower and care, and which makes the prospect of joining other relatives or a married child an attractive option. On the other hand, a fall in adult mortality will result in more couples reaching old age together. As Table 5 indicates, precisely these groups had a great tendency to live in a complex household.

WIDOWS, WIDOWERS AND THE THREE-GENERATION HOUSEHOLD

The largest group after married couples, resident children, and servants was that of widows and widowers. For several reasons, the number of widows was larger: 1.) males tended to marry younger females; 2.) the life expectancy of adult women was in the long run slightly higher than for adult men, despite a higher incidence of female mortality during child-bearing years; 3.) widowers were more likely to remarry than widows were. Taking into account the high overall death rate of middle-aged people, pre-modern society was crowded with widows. This was, by and large, an extremely vulnerable group, as the earning possibilities of males were much higher than those of females.

After the death of her husband, it was difficult for a widow to continue her husband's trade, especially if he had been an artisan. Women were effectively excluded from these kinds of occupation, although some were able to keep control of the business as a non-participating supervisor. Others had to search for work as unskilled laborers or seamstresses, while before their husbands' deaths they had mainly performed housekeeping tasks. For farmers' widows it was relatively easy to stay in charge of the farm, replacing the deceased husband with an adult farmhand. Laborers' widows usually continued to work as farm laborers, thought their existence became difficult as female farm laborers only usually could find agricultural work during the busy summer season, which lasted some three to six months (Van Nederveen Meerkerk & Paping, 2014).

The difference in the economic positions of widows and widowers resulted in a significantly better tax performance for widowers living with children or on their own (heads of households only). However, there were also many widows and widowers who headed a more complex household or were not a head of a household at all. Compared to married couples (Table 5) a considerable proportion of the widows were deserted by their

children at a relatively early stage in life (after the age of 55) and ended up in a so-called "empty nest".

One example is the 76-year old Sapke Alberts, who in 1829 had lived for more than 50 years in house no. 41 in Warfhuizen, where she would die three years later. Her husband, a laborer, had died in 1823, but, incapable of working herself, she was registered as having no occupation. One son and three daughters were still alive: two of the children were laborers, one was weaver and one was a shop-keeper. All of them lived in different villages some five to ten kilometers away. Incidentally, this was not unusual, as geographical mobility was high in the Groningen countryside (Paping & Pawlowski, 2018) and family members often did not live very near each other. In conclusion, Sapke owned her own house, but not one of her married children was inclined to join her in her last years, although presumably they might have given her some financial support.

A lot of the older widows, however, seem to have been unable to afford to run a household on their own. Quite a few became part of a complex household, usually three-generation households (128 out of 159 cases). However, the largest group of widows, those aged 61 and over (39% of the total), lived a solitary life alone in a house, sometimes accompanied by a servant or a boarder or lodger. Some had to rent a room or bed in a house with strangers, and many of them ended their lives in a poorhouse. As we have already seen, there was no implicit or explicit rule in this society that compelled children to take care of their elderly parents by taking them into their household.

Table 6. Living arrangements of widows according to age group, Groningen clay area, 1829-1850 (n=662)

	21-3	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71+
Solitary or boarder/lodger	14%	5%	10%	5%	21%	27%	40%	29%	43%
Living with children	71%	74%	83%	83%	67%	51%	30%	37%	20%
In complex households	14%	21%	7%	12%	12%	22%	30%	33%	37%
N	35	42	42	60	82	95	96	78	132

NB: Complex households include those in which they are living with siblings or other relatives. Childless widows living with their parents are not taken into account.

From Table 7, it becomes clear that there were far fewer widowers than widows. However, the difference in their respective living arrangements over the course of their lives was not very great. Elderly widowers also had a high likelihood of spending their last years alone in a household, or as a

boarder or lodger (33%), while they were also responsible for the existence of a lot of three-generation households (54 cases).

Table 7. Living arrangements of widowers according to age group, Groningen clay area, 1829-1850 (n=277)

	21-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71+
Solitary or boarder/lodger	18%	0%	20%	28%	17%	18%	24%	34%	40%
Living with children	71%	74%	68%	61%	75%	53%	46%	29%	19%
In complex households	12%	26%	12%	11%	8%	29%	30%	37%	42%
N	17	23	25	18	36	38	37	35	48

NB: Complex households include those in which they are living with siblings or other relatives. Childless widowers living with their parents are not taken into account.

These widows and widowers, much more than older married couples, were responsible for the existence of the majority of the three-generation households in the Groningen clay area (which made up 6.5% of the total number of households). However, it has also become clear that the number of three-generation households could theoretically have been much higher. Assume, for example, that 85% of the widows, widowers and married couples had surviving offspring, and all of them had married children by the age of 56 and non before (not a strange assumption, taking into account the fact that the median ages at marriage were 26 for males and 23 for females around 1820: Paping & Schansker, 2014). This would result in 802 (i.e. 943 × 0.85) potential three-generation households. In reality, only 214 three-generation households are recorded, amounting to 6.5% of the total of 3,306 households. Taking into account 43 older widows and widowers who were boarders or lodgers, and 7 who lived in laterally extended households, the number of households would fall to 2,768 and the share of potential three-generation households would rise to 29%, a proportion more than four times higher than is actually observed (compare the similar but far more refined method of Szoltysek, 2015b).

A fall in mortality and a decrease in the age at marriage would raise this potential number of three-generation households considerably. However, a higher age at marriage would result in a considerable fall in the proportion of potential three-generation households. Around 1785, the median age at marriage of males and females in the Groningen clay area was about 29 and 27, respectively. If we repeat this simple calculation with the same figures (ceteris paribus) but taking the age of 61 as the moment

for having at least one married child, then the proportion of potential three-generation households drops to 18%. Although reliable data on household structures are not available before 1810, there are some good reasons to assume that the number of three-generation households might have been considerably lower in the eighteenth century, especially when we take into account the higher mortality level before 1790.

The most common type of three-generation household was a widowed mother or father residing with a married couple with children, with no other relatives present. Sometimes it was the other way around in the register, and the surviving father or mother were still considered the heads of the household. Most situations stem from two different developments in the past: in the first scenario, a child married and she and her partner took up residence in the paternal household, while in the second, a couple settled somewhere and at some point the father and mother moved in.

An example of the first type is the farmer Harmannus Boerema (1765-1842), who as a widower bought a 27-hectare farm in 1811. Three children survived. His oldest son died on the farm in August 1826, two months after his oldest daughter married a widowed mill constructor. In December 1827, his youngest daughter (born in 1805) married a farmer's son, and afterwards cohabited with her father until his death in 1848. Initially the farm was the father's, but in the end the youngest daughter and her son acquired the property. Cohabitation was in this case an efficient way for the daughter and son-in-law to become farmers directly after marriage. For the father it was an attractive arrangement, because he did not have to run the large farm on his own with only servants to assist (in 1830 they employed 1 farm hand and 2 maids), while he ensured that his daughter would be available to care for him in the future.

In January 1830, hat maker Jan Beekman and his wife Tekla Spekkers lived together with her mother Maria van Duinen in a rented house in Wehe. Maria (1767-1837) had been widowed in 1818, her late husband having been a tailor in Saaxemhuizen, and had two surviving children. She was working as a female laborer in nearby Eenrum, when in April 1826 her daughter Tekla (at that point very pregnant) married an assistant hat maker and settled down in Warfhuizen. After a few years the family left for Wehe, where around January 1830 they formed a three-generation household with her mother. Around 1831, Jan Beekman and Tekla moved to Nieuwe Pekela (near his birthplace),where he enrolled as a sailor in the navy and died soon afterward. Mother Maria stayed behind and was still living in Wehe in 1836, though in a different house, where her unmarried

son (a tailor) died aged 35. After this, Maria also moved to Nieuwe Pekela to her only surviving widowed daughter Tekla, where she died in 1837. The three-generation household was in this case only a temporary stage, chiefly entered into as a means of solving the housing problems of this poor family, and seemingly not a preferred situation. At the moment her son-in-law left the region because of job opportunities elsewhere, Maria presumably made arrangements to live again in a 'normal' nuclear household with her unmarried son of 30, who possibly had been a live-in tailor's apprentice prior to this.

Table 8 (See next page) suggests that, if three-generation households were viewed as a means of handing over the house to the next generation, this was an extremely unsuccessful strategy. In 1829, there were already quite a few cases with complications, for example when sons or sons-in-law had different occupations from that of the parents. In a minority of cases the house was not owned but rented, so handing over the house was uncertain, as the actual owner could eject the inhabitants at the end of each yearly lease. Of the 18 cases listed, after ten years, half the houses had passed into the hands of strangers, in two cases a son had succeeded to the property rather that the daughter who had been living there, in five cases the oldest generation was still in charge, and in two of the five cases the resident married children had moved elsewhere. Only in two houses (a farm and a laborer's house) did the three-generation household lead to the succession of the resident married daughter or son. Most of the children living at home had married a few years before 1829. This might indeed point to the frequent use of a three-generation household to solve the temporary housing problems of newly-wed couples.

Taking into account the fact that the number of three-generation households was far less than it might have been, and that succession of houses and trades from one generation to another was not the rule in the Groningen clay area (only 18% of sons and 9% of daughters took over the parental household somewhere after marriage: Paping, 2009) there are good arguments to think that the main reasons for forming three-generation households were very different. As mentioned before, three-generation households could be of mutual benefit for the surviving parent and the married child, at least if the surviving parent had something to offer in the form of property, a potential livelihood, or perhaps assistance in caring for the children. For the numerous laborer families, cohabitation was mainly practiced because it was cheap, and married children took re-

Table 8. All three-generation households in the parishes of Leens, Wehe and Zuurdijk in existence in November 1829 (and the situation in the same house in 1839)

Place	Name parents	Age	Occupation 1st/2nd generation	Acquiring house	Moment widowhood	Marriage date live-in couple	Situation in house in 1839
Leens house 16	Widow Wierenga	73	Shopkeeper / shoemaker	1803	1812	Son: 1828	Others
Leens house 28	Widow Groothuis	70	Without / Shopkeeper	Rented	1823	Daug: 1829	Others
Leens house 43	Widow Mennema	49	Without / Laborer	Rented	Unknown from Frisia	Daug: c1826	Others
Leens house 48	Widow Rietema	68	Without / Laborer	Poorhouse	Unknown	Son: 1809	Others
Leens house 88	Widow Bles	79	Shopkeeper / laborer	C1780 (?)	Pre 1806	Daug: 1808	A son (!) instead
Leens house 93a	Widow Wiegers	66	Watchmaker	Mother is owner	Unknown	Son: 1825	Others
Leens house 102	Widow Helder	63	Laborer / Laborer	1802	1809	Daug: 1824	A son (!) instead
Leens house 109	Couple Oostenrijk (daughter aged 13)	54 / 54	Laborer / laborer owners	Parents are	-	Son: 1825; settled 1829	Parents without son
Leens house 112	Spinster de Vries	55	Laborer / laborer	Rented	Unmarried	Son: 1827	Others
Leens house 115	Widower Achterhof	59	Laborer / laborer	Pre 1806	1826	Son: 1828	Father without son
Leens house 121	Widow Warendorp	67	Farmer / farmer	1787	1807	Son: 1829	Only the son with family
Wehe house 19	Widower Bakker	71	Shopkeeper / cartwright	Pre 1806	1824	Daug: 1827	Same situation
Wehe house 23	Widower Danhof	66	Miller / miller	1804	1827	Daug: 1811	Same situation
Wehe house 28	Widow Spekkers	62	Laborer/ hat maker	Rented (c1828)	1818	Daug: 1826	Others
Wehe house 66	Widow Westerhof	74	Laborer / laborer	Pre 1789	Pre 1806	Daug: c1814	Only daughter (widow)
Wehe house 72	Widower Medema	59	Shoemaker / laborer	1816/25	1825	Daug: 1824	Same situation
Wehe (ship)	Widower Woltha	66	Skipper / skipper	On ship	1827	Son: 1821	-
Wehe (ship)	Widower Woltha	69	Skipper / skipper	On ship	1825	Daug: 1829	-
Zuurdijk house 4	Couple Boekhoud	77 / 75	Laborer / laborer	C1805	-	Daug: 1821	House disappeared
Zuurdijk house 24	Widow Jeltes	64	(schoolmas.) / laborer	Rented	1814	Son: 1813	Others

sponsibility for an ageing parent. However, the position of the surviving parent with respect to the married child was seriously weakened by not allowing other children to join the family household. The rareness of multiple households makes it perfectly clear that young couples in the Groningen clay area were not prepared to join a complex family household where the power base of the parent(s) was too great.

CONCLUDING REMARKS

During the second quarter of the 19th century, some 10% of the households in the Groningen clay area had a complex character, and 6.5% of the total consisted of three generations living together. There are good reasons to believe that at least the proportion of three-generation households had risen considerably from the end of the eighteenth century onward due to a fall in the age at marriage, which increased the number of potential three-generation households. Multiple households were very rare, and it was even more unusual that two related married couples lived in one household. Possibly, young married couples found these kinds of household unattractive to live in because of the greater power of the parents when more relatives were present.

The existence of three-generation households was presumably due to a variety of different reasons: to care for the elderly (what Ruggles, 2011, negatively coined the "dependency paradigm"), as a way of solving the problems of young couples, particularly with regard to housing (creating according to Ruggles, 2011 "intergenerational interdependence"), the incentive for all parties to save money on housing by living together. Only in a few cases was the three-generation household used as a means to hand over the house to the next generation. Although this happened frequently among farmers, even for them selling the farm was as good an alternative as handing the farm over to a son or daughter in this nuclear family society. The incidence of complex households was nearly as common in the richer strata of society as it was in the poorer ones.

As a result, many elderly people were living on their own or tried to keep one or more unmarried children at home as long as possible. In these cases, independence and freedom seem to have been considered more important than responsibility or security. The majority of the very old (over 70), however, lived together with at least one of their children or another relative. Complex households were not necessarily a traditional feature in

the first half of the nineteenth century, but they functioned quite efficiently as an important care institution for the elderly in this relatively modern economy.

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1. An earlier version of this contribution was presented at the ESSHC in Lisbon in 2008.
2. For the first household mentioned on an address, single persons were also counted as household economies.
3. Population according to the census: 1829: Bedum 2,720, Leens 2,736; 1849: Hoogkerk 1,046, Uithuizen 2,728, Winschoten 4,123, Zuidhorn 2,248. With 15.601 persons this is nearly the same as 15,577, indicating the completeness of the database.
4. The standard deviation of tax performance was usually around 20-25. If we take the database to be a sample and the sample size is about 100, differences of 5 show significant divergence from the total on a 5% level.

[6]

HANS KNIPPENBERG

The changing religious landscape of the Netherlands, 1971-2016

'FROM FATE TO CHOICE' 385

'Van lot naar keuze' ('From fate to choice') was the title of a contribution Theo Engelen (2003) made to a volume which he and I edited. His contribution concerned the changing fertility map of the Netherlands in the period from 1870 to 2000. One of my contributions (Knippenberg, 2003) concerned the changing religious map since the beginning of the 19th century, but Engelen's title would have fit my contribution as well. Like fertility, religion too became gradually more of a deliberate choice, including the option of having no religion.

We analyzed our subjects at the level of the Dutch municipalities using data from the Historische Databank Nederlandse Gemeenten (Historical Database of Dutch Municipalities), of which Engelen was one of the driving forces. Unfortunately, my religious maps ended in 1971, the year of the last population census, which was also the last source that allowed the analysis of religious data at the municipality level. Recently, however, it became possible to analyze the religious composition of the Dutch municipalities in more recent times by combining several large-scale CBS (Statistic Netherlands) surveys (Schmeets, 2016).

This development allows me to take up the thread again in this paper. I shall analyze the changes in the religious composition of the Dutch population since 1971 and detail the consequences for the geography of religions at the level of the Dutch municipalities. And, as we shall see, fertility and religion prove to be no independent phenomena.

Everyone who analyzes the religious composition of the Dutch population will be struck by its astonishing heterogeneity (Pellenbarg & Van Steen, 2015). The Handbook of the Christian Netherlands (Hoekstra & Ipenburg, 2008), described 647 different churches, congregations, and other religious communities. Moreover, these pertain only to the Christian part of the Dutch population; different denominations of Jews, Muslims, Hindus and Buddhists should be added.

A great part of this tremendous variety has historical backgrounds. In the past, most European states implemented the cuius regio, eius religio principle of the Peaces of Augsburg (1555) and Westphalia (1648), which meant that the ruler of a territory decided on the religion of his subjects. More or less religiously homogeneous states dominated by one of the three branches of Christianity (Roman Catholicism, Eastern Orthodoxy, and Protestantism, Lutheranism in particular) were the consequence (Knippenberg, 2006; Madeley, 2003; Rémond, 1999). The Netherlands, however, never implemented the cuius regio, eius religio principle. In the Republic of the United Provinces (1648-1795) the Calvinist Church certainly had a privileged position, but there was also freedom of religion, which was rather exceptional in those days (MacCulloch, 2004). As a consequence, the Netherlands never became homogeneously Calvinist.

Moreover, this relatively tolerant religious policy attracted immigrants from other European countries who were prosecuted because of their religion, such as Sephardic Jews from the Iberian peninsula, Ashkenazi Jews from Central and Eastern Europe, Calvinists (Huguenots) from France and the Southern Netherlands (now Belgium), Mennonites from Bern, Poland and Prussia, and Bohemian and Moravian Brothers from Czechia (Lucassen & Penninx, 1994).

During the 19th and 20th centuries Dutch Calvinism proved to be very vulnerable to secessions from the Dutch Reformed Church, starting with the 1834 Afscheiding and 1886 Doleantie. The democratic structure (with leadership being exercised by the church council) and independent position of the Calvinist churches facilitated those secessions and further splits, which gave rise to a rich variety of Gereformeerde (Reformed) churches. It was not until the 21st century that a significant countermovement succeeded. In 2004, the Dutch Reformed Church, the biggest Gereformeerde church (Gereformeerde Kerken in Nederland), and the Evangelisch-Lutherse Kerk (Evangelical Lutheran Church) merged into

the Protestantse Kerk in Nederland (PKN) (Protestand Church in the Netherlands). A minority of the mother church did not join this fusion and founded the Hersteld Hervormde Kerk (Restored Reformed Church).

From the end of the 19th century onward new branches of Protestant Christianity developed, mostly imported from abroad and of an evangelical or apostolic character, such as Free Evangelicals, Baptists, Adventists, Jehovah Witnesses, the Salvation Army, and Pentecostal and Apostolic congregations. In the same period and for the first time in history, substantial numbers of people left their church or religious community without joining another one. After the 1960s in particular, the number of people without any religious affiliation would increase so as to constitute the majority of the population.

Also from the 1960s onward, migrant churches and religions increased considerably the heterogeneity of the religious landscape. Labor migration (and the reunification of families), from Turkey and Morocco in particular, and more recently refugees from countries in the Middle East and North Africa, brought Muslims to the Netherlands. Earlier, the independence of Indonesia in 1949 had brought in Moluccans with their own churches. The independence of Suriname in 1975 encouraged many Surinamese to settle in the Netherlands, which increased not only the number of Hindus and Muslims, but also of Evangelical Brothers. More recently immigration of Christians, both Roman Catholic and Protestant (often Pentecostal) gave rise to new migrant churches for specific groups, such as Nigerians, Ghanaians and Cape Verdeans.

AN ATTEMPT AT QUANTIFYING

Table 1 provides a numerical overview of the most important denominations and religions at four points in time in the period 1971-2016. The composition of this table was not without serious problems. The data are derived from different sources, which are not always comparable: census (1971), membership registrations of churches, social science surveys, estimates of experts or the groups themselves, etc. Even the 1971 census proved to be incorrect as far as the different Gereformeerde denominations are concerned. For that reason, the data of these denominations are derived from the so-called Kampen database, which is based on the membership registrations of the denominations (Advokaat, Prak & Te Velde, 2007).

Further, earlier comparable overviews have been used, based on membership data and estimates (Becker & De Hart, 2006; Bernts et al., 2006;

Table 1 The religious affiliation of the Dutch population, 1971-2016/17

Religious affiliation	1971		1990		2005		2016/17		1971-2017
	Number	%	Number	%	Number	%	Number	%	%
Unaffiliated	3,078,370	23.6	4,644,353	31.2	7,796,333	47.8	9,386,174	54.9	205
Total affiliated	9,981,747	76.4	10,248,221	68.8	8,509,193	52.2	7,695,333	45.1	-23
Roman Catholic	5,273,663	40.4	5,559,550	37.3	4,406,000	27.0	3,832,000	22.4	-27
Dutch Reformed (Nederlands Hervormd)	3,077,071	23.6	2,677,244	18.0	-	-	-	-	-
Gereformeerde Kerken (Synodaal)	870,379	6.7	794,008	5.3	-	-	-	-	-
Lutheran	40,702	0.3	23,811	0.2	-	-	-	-	-
Protestant Church in the Netherlands (PKN)	3,988,152	30.5	3,495,063	23.5	2,329,284	14.3	1,849,202	10.8	-53
Hersteld Hervormde Kerk (vrij gemaakt)/ Gereformeerde Kerken	-	-	-	-	53,900	0.3	59,215	0.3	
Ned. Gereform. Kerken	112,075	0.9	143,666	1.0	158,539	1.0	151,545	0.9	35
Christelijke Gereformeerde Kerken	70,015	0.5	75,820	0.5	73,978	0.5	72,887	0.4	4
Gereformeerde Gemeenten (in Nederland)	92,714	0.7	109,012	0.7	124,126	0.8	129,160	0.8	39
Oud Gereformeerde Gemeenten	18,330	0.1	17,000	0.1	18,000	0.1	18,000	0.1	-2
Liberal Protestant (Doopsgezind/Remonstrant/Protestantenbond)	74,805	0.6	33,721	0.2	20,750	0.1	15,417	0.1	-79
Apostolic churches	42,897	0.3	36,330	0.2	32,959	0.2	27,200	0.2	-37
Pentecostal/Evangelical/Baptist congregations	77,085	0.6	119,218	0.8	146,600	0.8	155,000	0.9	101
Jehovah's Witnesses	24,410	0.2	31,359	0.2	30,728	0.2	29,839	0.2	22
Moluccan churches	13,905	0.1	20,000	0.1	25,000	0.2	20,000	0.1	43
Eastern Orthodox	6,588	0.1	12,000	0.1	30,000	0.2	30,000	0.2	355
Church of England	8,625	0.1	15,000	0.1	33,000	0.2	33,000	0.2	283
Other Christian	48,285	0.4	33,982	0.1	26,490	0.2	24,568	0.1	-49
Jewish congregations	4,834	0.0	7,500	0.1	8,839	0.1	20,300	0.1	319
Muslim	53,973	0.4	458,000	3.1	857,000	5.3	1,000,000	5.9	1,753
Hindu	2,518	0.0	61,000	0.4	99,000	0.6	128,000	0.7	4,983
Buddhist	895	0.0	20,000	0.1	35,000	0.2	100,000	0.6	11,073
Total population	13,060,117	100	14,892,574	100	16,305,526	100	17,081,507	100	31

Sources: 1971 Census; Kampen Database; Becker & De Hart, 2006, p. 30-31; Bernts et al., 2006; De Hart, 2014b; Wijma, 2017; kaski Reports; websites congregations; estimates

De Hart, 2014b). The most recent data are derived from KASKI reports, websites, surveys from Statistic Netherlands (CBS) and the Social and Cultural Planning office (SCP), and an update of the Kampen database (Wijma, 2017). Notwithstanding many uncertainties, several important changes can be noticed.

The first conclusion is that secularization is still going on. Despite a growing population, the number of people affiliated to a religious community is still declining. The majority of the Dutch population is no longer affiliated to a religion. How large that majority is depends strongly on the source that is used, and, as far as large-scale surveys are concerned, on the kind of questioning (one-step or two-step) (Becker, 2005). Membership data based on Church registers often (but certainly not always) overestimate the number of church members, because not everyone takes the trouble to have their name removed from the register when they leave the church community. Two-step questioning gives higher proportions of non-affiliates (and thus lower proportions of the different religious groups) than one-step questioning. Two-step questioning means that the respondent is asked: are you affiliated to a church or religious community; if yes, to which church or community? One-step questioning means that the respondent is asked: to which church or religious community are you affiliated; with the option of answering 'none'. Surveys from Statistics Netherlands (CBS) use one-step questioning, surveys from the Social and Cultural Planning Office (SCP) and most other institutions use two-step questioning.

As a consequence, a recent (one-step) CBS survey (Schmeets, 2016, p. 5) shows 50.1 percent of respondents as non-affiliated in 2015, whereas the (two-step) fifth edition of God in Nederland (Bernts & Berghuis, 2016, p. 21) results in 67.8 percent of respondents as non-affiliated in the same year. My overview in Table 1, which is partly based on membership data and estimates, comes out at 55 percent non-affiliated in 2016/17. More importantly, in general all sources show a declining trend in religious affiliation and participation. However, Table 1 further clearly indicates that there are large differences between the religious communities: some are even growing to a large extent. Therefore, we must look more closely at the different churches and religious communities involved.

Both the Protestant and the Roman Catholic mother churches lost considerable numbers of members. The Protestant Church in the Netherlands (PKN) more than halved compared to the total of its then separate parts in 1971. The founding of this church in 2004 has not stopped this trend.

In general, members of the former Dutch Reformed Church (now PKN), the more liberal members in particular, secularized earlier and to a greater extent than the orthodox Calvinists (Gereformeerden). However, membership of the biggest Gereformeerde denomination, which joined the PKN, was already diminishing in 1975 due to declining fertility and apostasy (Dekker 1992; 2013). Also, the Lutheran part of the PKN was already in decline before joining the PKN.

Table 2 The Protestant Church in the Netherlands (PKN) 2006-2017

	2006	2010	2017*)	2006-2017 %
Baptized members	1,014,582	933,328	818,627	-19
Confirmed members	929,094	855,931	744,299	-20
Other registered members	385,608	307,515	286,276	-26
Total members	2,329,284	2,096,774	1,849,202	-21
Church attendance	460,000	386,100	337,000	-27
% attendance/members	19.7	18.4	18.2	-8
Baptisms	11,000	10,000	7,655	-30
Confirmations	6,100	5,100	3,854	-37
Church marriages	3,100	5,550	5,100	65
Active parish ministers	2,197	2,067	1,790	-19
Church municipalities (Protestant)	434	625	777	79
Church municipalities (Hervormd)	866	679	527	-39
Churches (Gereformeerd)	465	342	235	-49
Church municipalities (Luthers)	51	45	34	-33
Total municipalities/churches	1,816	1,691	1,573	-13

Source: PKN Statistische Jaarbrieven 2015 and 2017; KASKI Kerncijfers PKN
*) Church attendance, baptisms, confirmations and church marriages 2014; ministers 2015

Table 2 shows more details of this decline since 2006. The table further shows that the merger of the three denominations at the national level was not immediately and in all regions followed at the local level, but the trend towards more Protestant instead of Hervormde, Gereformeerde or Lutheran communities is clear. Nevertheless, in 2017, half of the local communities still kept their original identity.

The Roman Catholic Church, which saw its membership figures increase slightly between 1971 and 1990 (but at a slower rate than the Dutch population), joined the declining trend thereafter. However, other church figures show that the decline started earlier (see Table 3). Between 1980 and 2015, the total number of people that attended a Catholic church in a

given weekend in March declined by no less than 85 percent. In the same period, the number of active priests and parishes decreased at an unprecedented rate. Since the mid-1990s, the number of parishes has outnumbered the number of priests, meaning that many parishes have to share a priest. Pastoral workers, permanent deacons and volunteers, who are not allowed to administer the sacraments, only partly compensate for this loss. In line with these developments, the participation in church rituals has also declined considerably.

Table 3 The Roman Catholic Church in the Netherlands, 1980-2016

	1980	1990	2000	2010	2016	1980-2016 %
Church members	5,453,217	5,559,550	5,106,333	4,166,000	3,832,000	-30
Church attendance	1,227,100	728,000	438,700	266,300	186,700	-85
% attendance/members	22.5	13.1	8.6	6.4	4.9	-78
Parishes	1,791	1,744	1,600	1,139	726	-60
Active priests	3,374	2,138	1,242	635	522	-85
Baptisms	55,900	51,100	42,400	23,840	14,030	-75
First communions	74,200	46,300	44,600	32,410	19,870	-73
Church marriages	28,100	18,600	10,700	3,865	1,910	-93

Source: Becker & De Hart 2006: 35; KASKI Kerncijfers Rooms-Katholieke Kerk

A second conclusion to draw from Table 1 is that this general picture of considerable decline does not apply to the Gereformeerde churches that did not join the PKN. With the exception of the Oud Gereformeerde Gemeenten, all saw their membership figures grow between 1971 and 2016, most of them by a substantial amount. The Gereformeerde Gemeenten and the Gereformeerde Kerken (vrijgemaakt) in particular had growth rates of almost 40 percent. High fertility and a kind of verzuiling ('pillarization') are important factors in the explanation of these grow rates.

Following Lesthaeghe & Wilson (1986), Engelen has pointed out in several publications that the decline of fertility in the Netherlands depended not only on economic (or demographic) motivation, but also on cultural and psychological acceptance (Engelen, 1997; 2003; 2010; Engelen & Hillebrand, 1986). That acceptance was strongly influenced by religion, which in general stimulated a pro-natal attitude or prohibited anti-conception.

However, motivation was also influenced by political and cultural factors. The relatively high fertility in the Netherlands until the 1960s was almost entirely a consequence of the specific political-religious constellation

of the confessional verzuiling ('pillarization'), the segregation of society in separate orthodox Protestant and Roman Catholic subcultures and institutional networks (Knippenberg & De Vos, 2010a; 2010b). Both 'pillars' were in a minority position and had to compete not only with the liberal and socialist segments of society, but also with each other, which motivated a relatively high fertility. During the 1960s and 1970s, Dutch society 'de-pillarized' as a consequence of strong secularization and the cultural revolution of the 1960s, and its fertility declined spectacularly.

At the same time, however, two orthodox Calvinist 'mini-pillars' developed: an experiential Calvinist (bevindelijk Gereformeerde) pillar, the rank and file of the Staatkundig Gereformeerde Partij (SGP), and a liberated Calvinist (vrijgemaakt-Gereformeerde) pillar, the rank and file of the Gereformeerd Politiek Verbond, that in 2000 merged with the Reformatorisch Politieke Federatie into the Christen Unie (CU) (Janse, 1985; 2015; Klei 2011; Stoffels 1995). The Gereformeerde Gemeenten (in Nederland), Oud-Gereformeerde gemeenten, part of the Christelijk Gereformeerden and the Hersteld Hervormde Kerk belong to the experiential pillar. The liberated pillar attracted in the first place members of the Gereformeerde Kerken (vrijgemaakt) and its offshoot the Nederlands Gereformeerde Kerken, but after the founding of the Christen Unie it also attracted people from evangelical congregations.

In a recent analysis of regional differences in fertility in the Netherlands, the regional proportion of votes for the SGP and the CU at Second Chamber parliamentary elections proved to be one of the main explanatory factors (Huisman & De Jong, 2017). The more voters for these parties, the higher the regional fertility.

However, even these experiential and liberated Gereformeerden are not insensible to secularization tendencies. The (declining) relatively high fertility of the Gereformeerde gemeenten now scarcely counterbalances the numbers leaving the church, and the Gereformeerde Kerken (vrijgemaakt) have been experiencing declining membership since 2003 (Dekker, 2013; Janse, 2015).

A third conclusion to draw from Table 1 is that the more recent branches of Protestantism show a totally different picture. In contrast with the secularizing Dutch society in general, the Evangelical and Pentecostal communities in particular experienced tremendous growth. It is very difficult to obtain reliable figures, but the trend is clear. Including Baptists, Adventists and the Salvation Army, the 1971 census counted 77,085 people affiliated to these congregations. Recent estimates vary from 132,000 (De

Hart 2014b, p. 104) to 148,000 (Bernts et al., 2006, p. 107). My own estimate for 2016 is about 160,000.

There is a wide range of different congregations involved. The biggest church is the Verenigde Pinkster- en Evangeliegemeenten, founded in 2002 as a merger of the Broederschap van Pinkstergemeenten and the Volle-Evangeliegemeenten Nederland, which included about 170 congregations and 20,000 believers in 2014 (Nederlands Dagblad 4 October 2014). Other churches are Rafaël Nederland, Bethel Pinksterkerk Nederland, Volle Evangelie Bethel Kerk, Bethel Pentecostal Temple Fellowship Nederland, Newfrontiers, and Victory Outreach Nederland. The Evangelische Broedergemeenten (c. 15,000 members) with many members from Suriname should also be mentioned. The most important Baptist churches are the Unie van Baptistengemeenten and the Broederschap van Baptistengemeenten.

Not all evangelical congregations have followed the upward trend. The Salvation Army experienced a steady decline from 14,020 soldiers in 1990 to 5148 in 2016 (Jaarverslag Leger des Heils, 2016). The Baptist congregations stabilized more or less at about 18,000 adherents.

However (and this is the fourth main conclusion), the most spectacular change in the Dutch religious landscape relates to the unprecedented increase in the numbers of Muslims, Hindus, and Buddhists. The 1971 census counted almost 54,000 Muslims, 2500 Hindus and 900 Buddhists. Since then, we are no longer informed of the exact number of people who are affiliated with these religions. Consequently, we are driven back to estimates based on immigration statistics (on origin) or large-scale surveys. Both sources have their setbacks. The (unknown) religious composition of the immigrants is not always the same as the (known) religious composition of the country of origin, and in large scale surveys immigrant groups are often underrepresented (Van Herten, 2009; Van Herten & Otten, 2007).

According to the most recent estimates based on large-scale surveys, there are between 850,000 (Schmeets, 2016) and 1,000,000 (Bijl et al., 2017, p. 218) Muslims living in the Netherlands, i.e. 5-6 percent of the population. They almost all have an immigrant background: either they themselves or their parents were not born in the Netherlands. The vast majority are of Turkish or Moroccan origin (Table 4). Other Muslims came from the former colony of Suriname and, more recently, as refugees from other non-Western countries such as Afghanistan, Somalia, Iraq, Iran, Pakistan, Egypt, Tunisia and Syria. A relatively high, but declining, fertility also contributed to the enormous growth of Islam in the Netherlands.

Table 4 Number of Muslims in the Netherlands by origin, 2007/2008

Morocco	296,000
Turkey	285,000
Suriname	34,000
Afghanistan	31,000
Iraq	27,000
Somalia	20,000
Other non-Western countries	79,000
Western countries	40,000
Netherlands	13,000
Total	825,000

Source : Van Herten 2009

The large majority of the Muslims of Turkish origin and all Moroccan Muslims are Sunni, a minority (50,000) of Turkish origin are Alevite. The majority of Muslims of Surinamese origin are Sunni, a minority are Ahmadiyya (Bernts et al., 2006). The current number of mosques is not known exactly, but recent estimates give somewhere between 450 and 475 mosques (Bernts et al., 2006; De Hart, 2014a; Van Oudenhoven et al., 2008).

After initial indications of some secularization (Phalet & Ter Wal, 2004), there has been hardly any secularization among Muslims of Turkish and Moroccan origin in the last decade; mosque attendance by the second generation has actually increased. According to recent surveys, it appears that there is a continuing religious vitality among these immigrant groups as a consequence of socialization in immigrant families and communities with relatively strong intra-group ties. Also, the possibility of a kind of 'reactive religiosity' in confrontation with an increasing public hostility towards Islam (see the rise of the anti-Islam political party PVV of Geert Wilders) cannot be excluded (Knippenberg, 2014; Maliepaard & Gijsberts, 2012).

The current number of Hindus is uncertain too. Estimates vary from 105,000 (Schmeets, 2016) to 160,000 (Bernts, Van der Velde & Kregting, 2012b; SCP 2017), i.e. 0.6 to 0.9 percent of the population. These estimates indicate a strong growth in the number of Hindus since 1971. The vast majority are Hindustanis (84% in 2004; CBS StatLine) from the former colony of Suriname; others came from India and Sri Lanka (Tamils), but also from Western countries (e.g. the United Kingdom). The independence of Suriname in 1975 was a major impulse for the immigration of Hindus to the Netherlands. Between 1971 and 1980, the number of Hindus increased twelvefold. One of the main causes was the agreement between the Netherlands and Suriname that Surinamese could opt for Dutch nationality

until five years after independence under the condition that they emigrated to the Netherlands (Oudhof, Harmsen, Loozen & Choenni, 2011). Also, after 1980 many Surinamese departed to the Netherlands mainly for political and economic reasons. The total number of Surinamese in the Netherlands increased from 53,000 in 1972 to 342,000 in 2010, including around 160,000 Hindustanis (Choenni, 2011, p. 17). Not all Hindustanis are Hindus; almost 80 percent are Hindu, 18 percent Muslim and 2 percent Christian (Choenni, 2013, p. 42). That leads to an estimate of 128,000 Hindus.

Establishing the current number of Buddhists is even more difficult, partly because of problems of definition and partly because Buddhists have a low degree of organization. The most important organization is the Boeddhistische Unie Nederland (BUN) with 20,500 members. However, not all sanghas (Buddhist communities) are part of the BUN and there are many individuals who do not participate in a sangha and still feel themselves attracted to Buddhism, which means that there are no reliable figures. A recent KASKI report (Bernts, Van der Velde & Kregting, 2012a) estimated the number of Buddhists in 2012 as being between 97,500 and 425,000. In the CBS survey (Schmeets, 2016), 0.37 percent considered themselves as Buddhist, which would be around 63,200 people in 2016. Although it remains very difficult to decide which figure to accept, it is clear that Buddhism has increased considerably between 1971, when only 895 people called themselves Buddhist, and 2017. Immigration from (partly) Buddhist countries such as Thailand (15,000), Vietnam (10,000), China (7,000), and Japan (5,000) is one cause of this growth; the increasing popularity of Buddhist philosophies and activities among native Dutch people is another (Bernts, Van der Velde & Kregting, 2012a). Somewhat arbitrarily, the estimation in Table 1 results in 100,000 Buddhists.

The 1971 census counted 4834 people belonging to one of the Jewish congregations: 3668 to the Nederlands-Israëlitisch Kerkgenootschap, 227 to the Portugees-Israëlitisch Kerkgenootschap and 939 to the Liberal Jewish congregation. This is probably an underestimation of the real numbers. After the Holocaust, there was an understandable fear among Jews of being counted as Jews. Impeta (1972, p. 16) provided higher numbers for 1971: 8906 in total. More recent figures, based on surveys and modeling, result in 53,000 (ethnic) Jews in 2010, of whom 18,000 belong to one of the Jewish congregations (Van Solinge & Van Praag, 2010). This outcome is in line with the CBS survey (Schmeets, 2016) in which 0.12 of the respondents are affiliated with the Jewish religion. This leads to about 20,300 religious Jews in 2016.

Unfortunately, it is not possible to analyze the current geographical distribution of all the churches and religious communities that are recorded in Table 1. Consequently, when we want to compare the geographical distribution in 1971 (based on the last population census) with the distribution in 2015, we must select those communities for which data are available. In my introduction, I mentioned the CBS database, which combines six yearly surveys of about 100,000 respondents each in the period 2010-2015 (Schmeets, 2016). This database allows me to map the current geographical distribution of the main denominations and religions at the level of municipalities. Five municipalities with fewer than 150 respon-
396 dents have been excluded: Rozendaal, Ameland, Schiermonnikoog, Terschelling, and Vlieland.

The data on religion concern that part of the population aged 18 or more, using the following classification based on one-step questioning: Roman Catholic, Reformed (Hervormd), orthodox Calvinist (Gereformeerd), Protestant Church in the Netherlands (PKN), Islamic, Jewish, Hindu, Buddhist, other religion, and no religion. Formally speaking, all Reformed (Hervormden) and part of the orthodox Calvinists (Gereformeerden) are now members of the Protestant Church in the Netherlands (PKN), but as we saw in Table 2, many local church communities within the PKN identify themselves with pre-PKN labels. It is likely that some of the respondents did so too. Since we do not know whether we are dealing with Gereformeerden inside or outside the PKN (which makes a big difference), I shall not analyze those who called themselves Gereformeerd in the CBS surveys. I have further combined the Reformed and PKN classes under the PKN label. Since it includes a wide range of very different religious communities, the category 'other religion' will not be analyzed.

A recent update of the Kampen database (based on membership data) allows me to further analyze the orthodox Calvinists (Gereformeerden) outside the PKN (Advokaat, Prak & Te Velde, 2007; Wijma, 2017).

ROMAN CATHOLICS

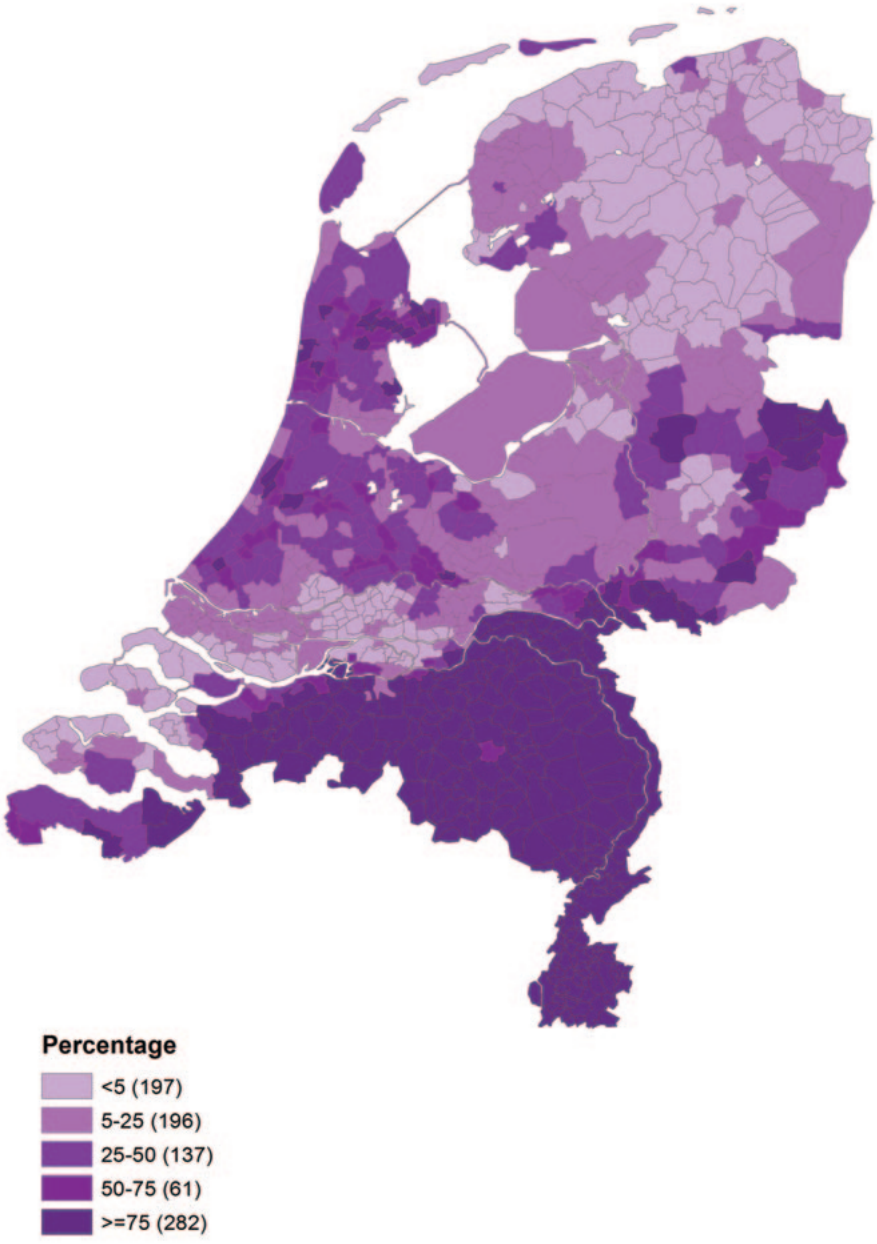
Maps 1 and 2 record the geographical distribution of the Roman Catholics in 1971 and 2010/15 according to the municipal classifications of 1971 and 2016. There were 873 municipalities in 1971 and 390 in 2016. It is always fascinating to see that the main elements of the current geographical pat-

tern have a history of four centuries. The frontline during the Twelve Years' Truce (1609-1621), a ceasefire in the Dutch Revolt (1568-1648) against their Catholic Spanish King, determined most of the border between Protestants and Catholics. South of this border, in the area controlled by the Spanish troops, all Protestants were forced either to return to the Catholic mother church or to leave. As a consequence, many Protestants left the Southern Netherlands for the Northern part, among them for instance 58 percent of the inhabitants of the city of Antwerp, which had a population of 100,000 and had been a major center of the Reformation. Protestants who remained reverted to Catholicism. As a result, the area south of the demarcation line, including the current provinces of North Brabant (except the Land van Heusden en Altena) and Limburg, and parts of Twente and the Achterhoek, became homogeneously Catholic.

In the Northern part there was freedom of religion, although the Calvinist Church had a privileged position. Consequently, there remained Catholic enclaves (e.g. in Holland and Utrecht) and the provinces of North Brabant and Limburg, which were conquered by the Dutch after 1621, did not became Protestant (Knippenberg, 1992, p. 15-32). Although the geographical pattern shows remarkable continuity over time, this does not mean that there are no differences between 1971 and 2010/15. Internal migration brought Catholics to the province of Drenthe and non-Catholics to North Brabant. For this reason, despite secularization, the proportion of Catholics in Drenthe stayed at almost the same level, whereas North Brabant (with secularization naturally as a contributing factor) experienced the biggest decline of all provinces (Table 5), in particular in its cities. In Eindhoven (36%), Breda (41%), Tilburg (46%), and 's-Hertogenbosch (46%), Roman Catholics are no longer the majority of the population. The decline in Limburg was much smaller. Starting with the closure of the coal mines after 1965, this province had a negative internal migration balance, mainly for economic reasons (CBS StatLine). Middle and South Limburg, and East Brabant, have the highest concentrations of Catholics in 2010/15, with the municipalities of Simpelveld (89%) and Gulpen-Wittem (87%) on top.

In the Western part of the country, the crumbling of the Roman Catholic pillar in the 1960s and 1970s and the ensuing secularization and decline of Catholic fertility diminished the proportion of Catholics considerably. Only in a few municipalities are Catholics still in the majority. In the northern part of the country, Roman Catholics are dispersed over many municipalities, where they are a small minority of the local population.

Map 1 The percentage of Roman Catholics per municipality in 1971



Map 2 The percentage of Roman Catholics per municipality in 2010/15

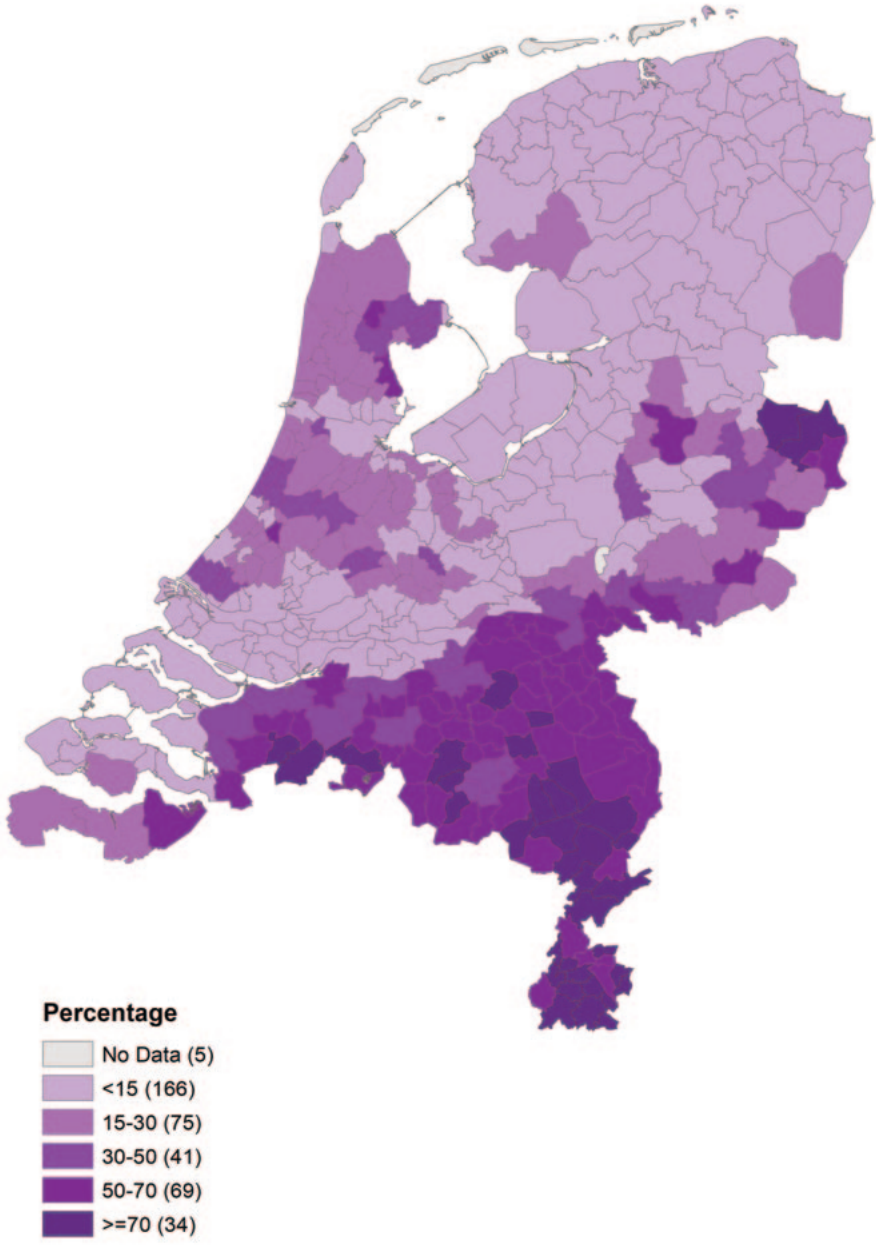


Table 5 The percentage of Roman Catholics per province, 1971-2015

	1971	2015	Change abs	1971-2015 %
Groningen	7	5	-2	-31
Friesland	8	7	-2	-20
Drenthe	10	9	0	-3
Overijssel	33	23	-9	-28
Flevoland	24	12	-12	-49
Gelderland	39	22	-17	-44
Utrecht	31	13	-18	-57
North-Holland	31	16	-15	-47
South-Holland	25	15	-10	-42
Zeeland	27	16	-11	-40
North-Brabant	86	48	-38	-44
Limburg	93	65	-28	-30

Sources: 1971 Census; Schmeets 2016 (population at least 18 year)

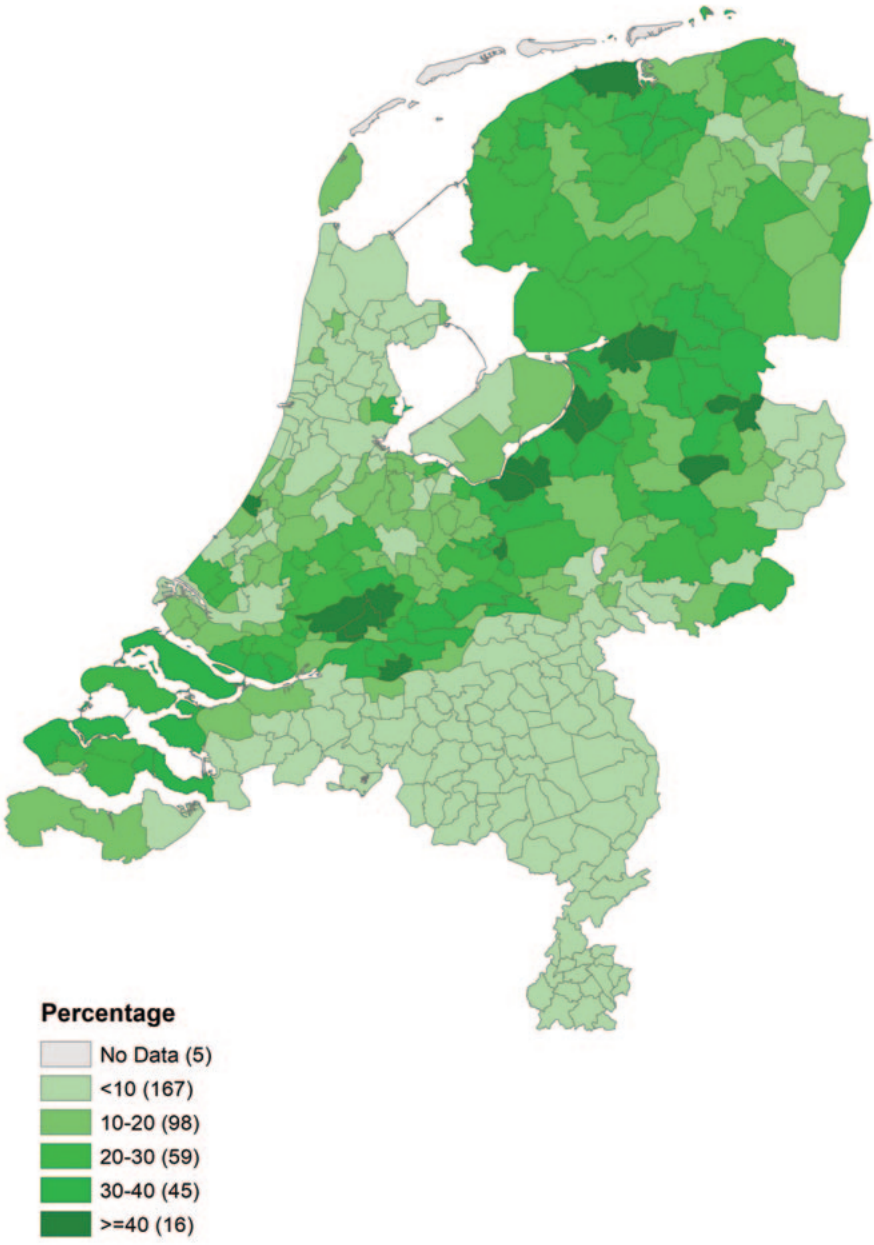
HERVORMDEN/PKN AFFILIATES

Due to the aforementioned problems with the classification of Protestants in the CBS surveys and the incorrect data concerning the different kinds of orthodox Calvinists (Gereformeerden) in the 1971 census, a reliable comparison of the geography of the different kinds of Protestants in 1971 and 2010/15 is not possible. Therefore, only the current geographical distributions will be analyzed.

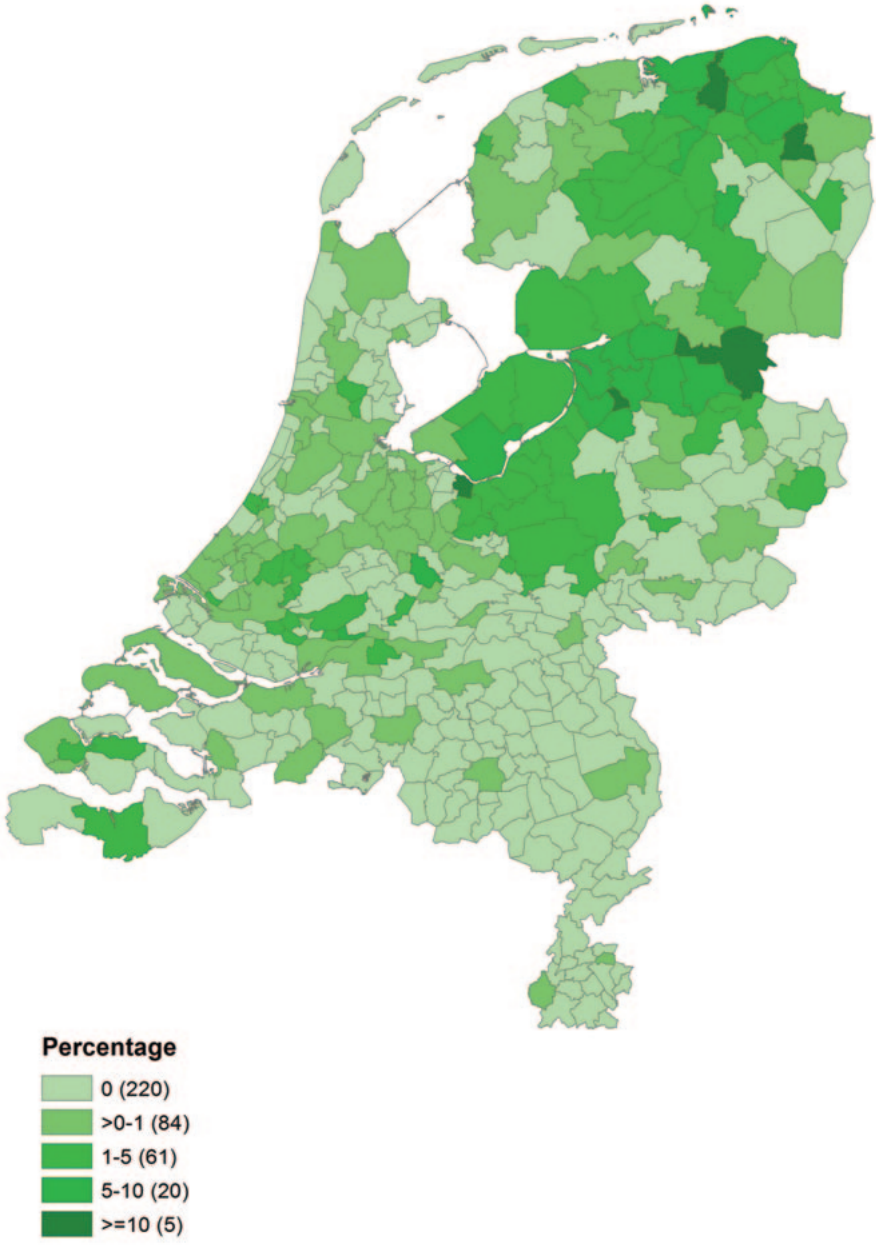
Map 3 records the geographical distribution of those who called themselves Reformed (Hervormd) or Protestant Church in the Netherlands (PKN), thus covering the largest part of the PKN affiliates. In many ways this map is the opposite of Map 2 (Roman Catholics), with few PKN affiliates in the south-east of the country and in Twente. However, there are also few PKN affiliates in the western part of the country, the Randstad (the conurbation of big cities in North Holland, South Holland, and Utrecht), North Holland and Flevoland in particular, and in the northern part, East Groningen in particular.

Most PKN affiliates are found in what has been called the Protestant Belt of the Netherlands (Protestantenband; Knippenberg et al., 1989), which extends from the isles of Zeeland and South Holland via the Alblasserwaard, the Land van Heusden en Altena, Utrecht and the Veluwe to Overijssel and Friesland. In this belt, the highest concentrations (57%) are found in Renswoude, Putten, Staphorst and Oldebroek. Also, in Zederik and Aalburg, more than half of the population is affiliated to the PKN.

Map 3 The percentage of Dutch Reformed/PKN affiliates in 2010/15



Map 4 The percentage of Gereformeerden (Vrijgemaakt) and Nederlands Gereformeerden per municipality in 2010/15



Data for the orthodox protestants outside the PKN are of a different kind from the PKN data of Map 3. They comprise membership data instead of survey data. The membership data provide the number of orthodox Gereformeerden in each local church community, which is geographically defined by the postcode of the church involved. Local population data are derived from the municipality where the church is located. In this way, it became possible to count the proportion of the municipality population that belongs to the domination involved. This probably leads to a small overrepresentation, since it is possible that there are church members who are living outside the municipality where the church is located. Consequently, this could also cause some underrepresentation in neighboring municipalities lacking such a church. With this in mind, two maps are constructed: Map 4 records the geographical distribution of the Vrijgemaakt-Gereformeerden and its offshoot, the Nederlands Gereformeerden, while Map 5 provides the geography of the experiential Gereformeerde Gemeenten (in Nederland).

The liberated Calvinists (Map 4) are concentrated in the northern part of the Protestant Belt, including the northern part of Groningen. The members of the Gereformeerde Gemeenten (in Nederland) (Map 5) are concentrated in the southern part of the Belt, with overlap in the middle. Since this southern part is the heartland of the experiential (Refo-)pillar, it has also been called the Refoband (Snel, 2007).

The highest concentrations of liberated Calvinists are found in North and West Groningen and in a zone from Bunschoten-Spakenburg (which has by far the highest proportion: 38%) in Gelderland and Zeewolde (7%) in Flevoland via Oldebroek (8%) and Hattem (14%) to places in Overijssel such as Staphorst (8%) and Hardenberg (12%). In the western part of the country, the proportions are very low. In only a few municipalities is the proportion of Calvinists higher than one percent of the population. The same holds true for the provinces of North Brabant and Limburg, and the largest part of Zeeland.

Comparing membership data per classis between 1971 and 1981, I was previously able to establish that despite the general growth of liberated Gereformeerden, these Gereformeerden had serious problems with maintaining the number of churches and believers in the urban agglomerations in the western part of the country (Knippenberg, 1992). Relatively strong secularization, suburbanization and internal migration from the western

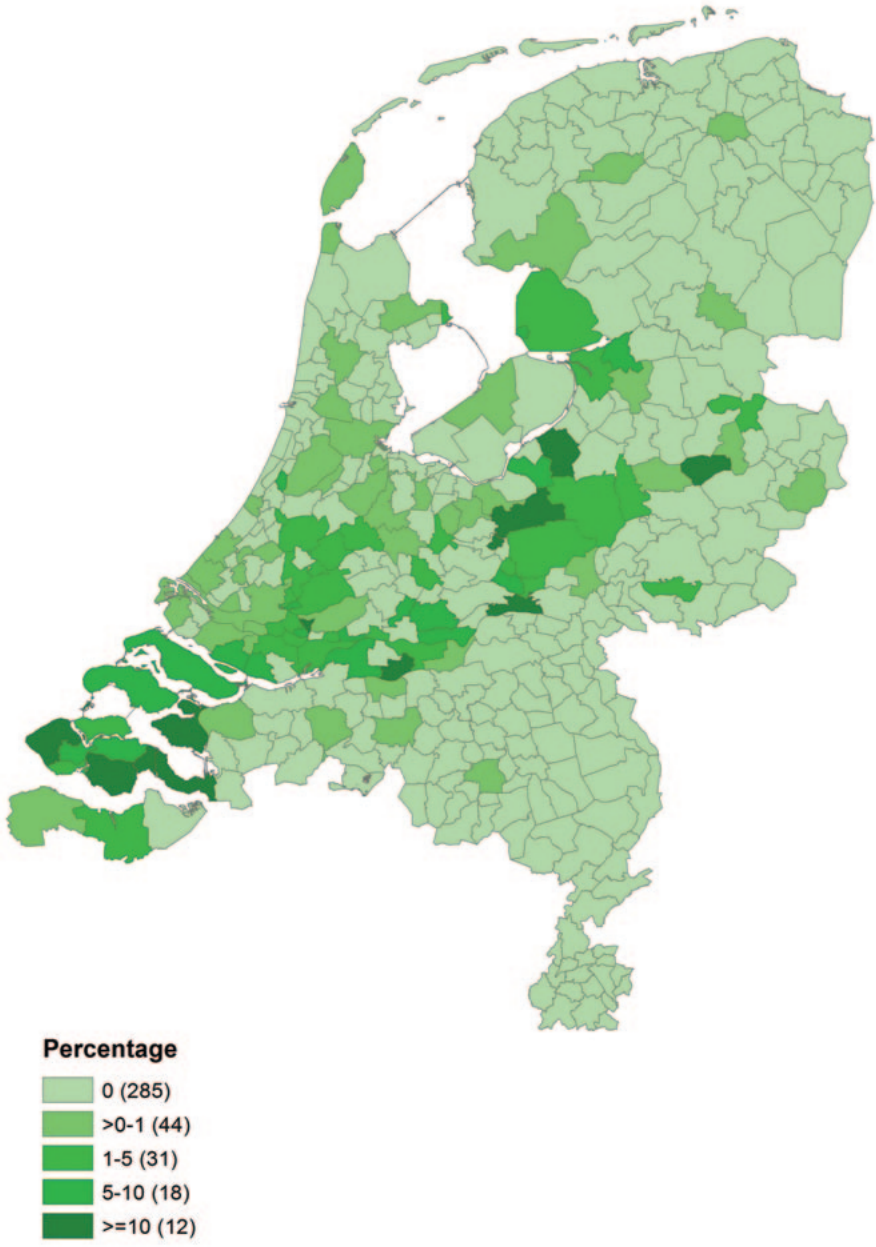
to the eastern parts of the country were responsible. It seems plausible that this trend has also continued after 1981.

The members of the Gereformeerde Gemeenten (in Nederland) are highly concentrated in relatively few municipalities (Map 5). Almost 57 percent are living in the 30 municipalities in which more than five percent of the local population belong to these experiential Gereformeerden. In 285 municipalities they are completely unrecorded. The provinces of Zeeland and Gelderland have the highest concentrations. Reimerswaal in South Beveland has the highest concentration of all municipalities: the 7,200 members there form almost one third (32%) of its population. It has four Reformatorische primary schools and one Reformatorische secondary school (Calvijn college) (http://www.reimerswaal.nl 2018). The presence of this kind of schools is an important contributing factor to the high concentration of these experiential Gereformeerden (Janse 1996). The highest concentrations in Gelderland are found in the neighboring municipalities of Scherpenzeel (25%) and Barneveld (18%), and in Neder-Betuwe (17%). The municipality of Rijssen-Holten (19%) has the highest concentration in Overijssel, and Alblasserdam (14%) has the highest in South Holland. In the other provinces (with the exception of the northwest corner of North Brabant) hardly any members of the Gerefomeerde Gemeenten occur. In general they are living in rural communities.

Members of the Hersteld Hervormde Kerk are those who were affiliated to the Gereformeerde Bond in the former Dutch Reformed Church, but did not join the PKN. They can also be considered as experiential Calvinists. Their geographical distribution is similar to that of the Gereformeerde Gemeenten, but the strong concentration in Zeeland (Zuid-Beveland and Walcheren in particular) is lacking. In colloquial terms, they are living in the Refo-belt only 'from Tholen to Staphorst' (Janse, 1996, p.180). Staphorst (30%) has the highest concentration.

Members of the Christelijke Gereformeerde Kerken are living in a more dispersed pattern. With the exception of the Catholic South, they occur in all provinces, with the lowest numbers in North Holland. The former island of Urk has by far the highest concentration: 35 percent of its population belong to this denomination, followed by Bunschoten-Spakenburg (9%).

Map 5 The percentage of members of the Gereformeerde gemeenten and Gereformeerde Gemeenten in Nederland per municipality in 2010/15



MUSLIMS

The geographical distribution of the Muslims was mainly determined by the settlement patterns of Turks and Moroccans. In general, they settled in the western part of the country, in the (agglomerations of the) big cities in particular. Turks settled more in Rotterdam and The Hague, Moroccans more in Amsterdam and Utrecht. Outside the Randstad, there were three other concentrations: the cities of North Brabant, Twente and Arnhem/Nijmegen (Atzema & Buursink, 1985).

At the regional level, we find high concentrations of Moroccans in the Gelderse Vallei, the Utrechtse Heuvelrug, central Holland, and more dispersed numbers in North Brabant and central Limburg; Turks are living more in Twente, the Achterhoek, the north-eastern part of North-Brabant, Rijnmond and the Zaan region. The background of these differences between Turks and Moroccans lies in their different orientations in the labor market. Turks tend to be employed more in the traditional industries, Moroccans more in the service sector (Knippenberg, 1992, p. 219-220).

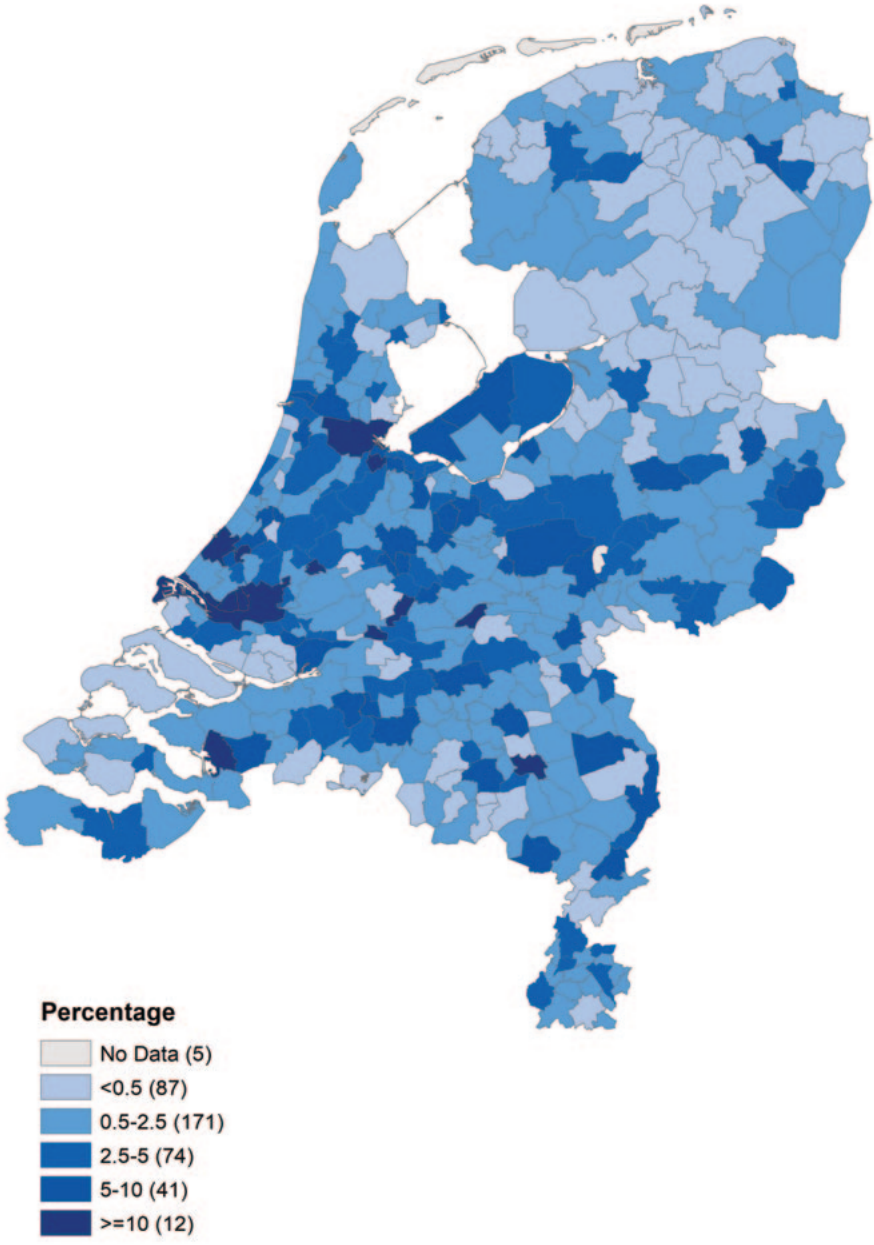
Map 6 shows the geographical distribution of the Muslims in 2010/15. The highest concentrations of Muslims occur in the big cities of The Hague (15%), Rotterdam (14%), Amsterdam (12%), and Utrecht (10%), and in some smaller industrial cities, such as Leerdam (19%) and Bergen op Zoom (13%).

There are few Muslims in the northern part of the country. The same holds true for the province of Zeeland, where all municipalities have percentages of Muslims below the national figure of 5 percent.

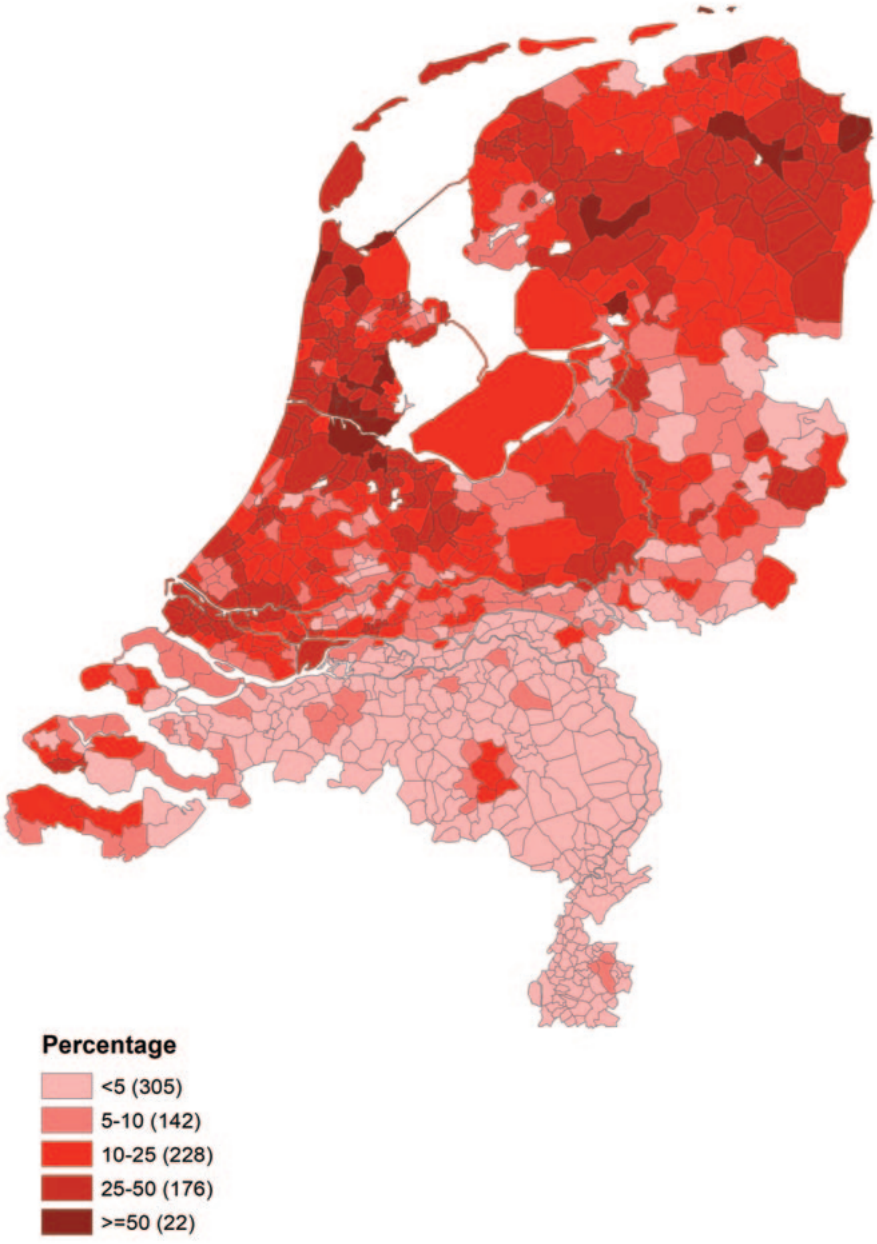
HINDUS

The geographical distribution of Hindus in the Netherlands is characterized by a strong concentration in The Hague and its suburbs agglomeration, and to a lesser extent in the agglomeration of Rotterdam. The Hague itself hosts about a quarter of all Hindus in the Netherlands, i.e. five percent of its population. About 18,500 Hindus are living in Rotterdam, i.e. three percent of its population. In the agglomeration of Amsterdam, including its overspill region in Flevoland, a smaller concentration of Hindus occurs. About one percent of the Amsterdam population, two percent of the population of Almere and Diemen, and one percent of the Lelystad population are Hindus.

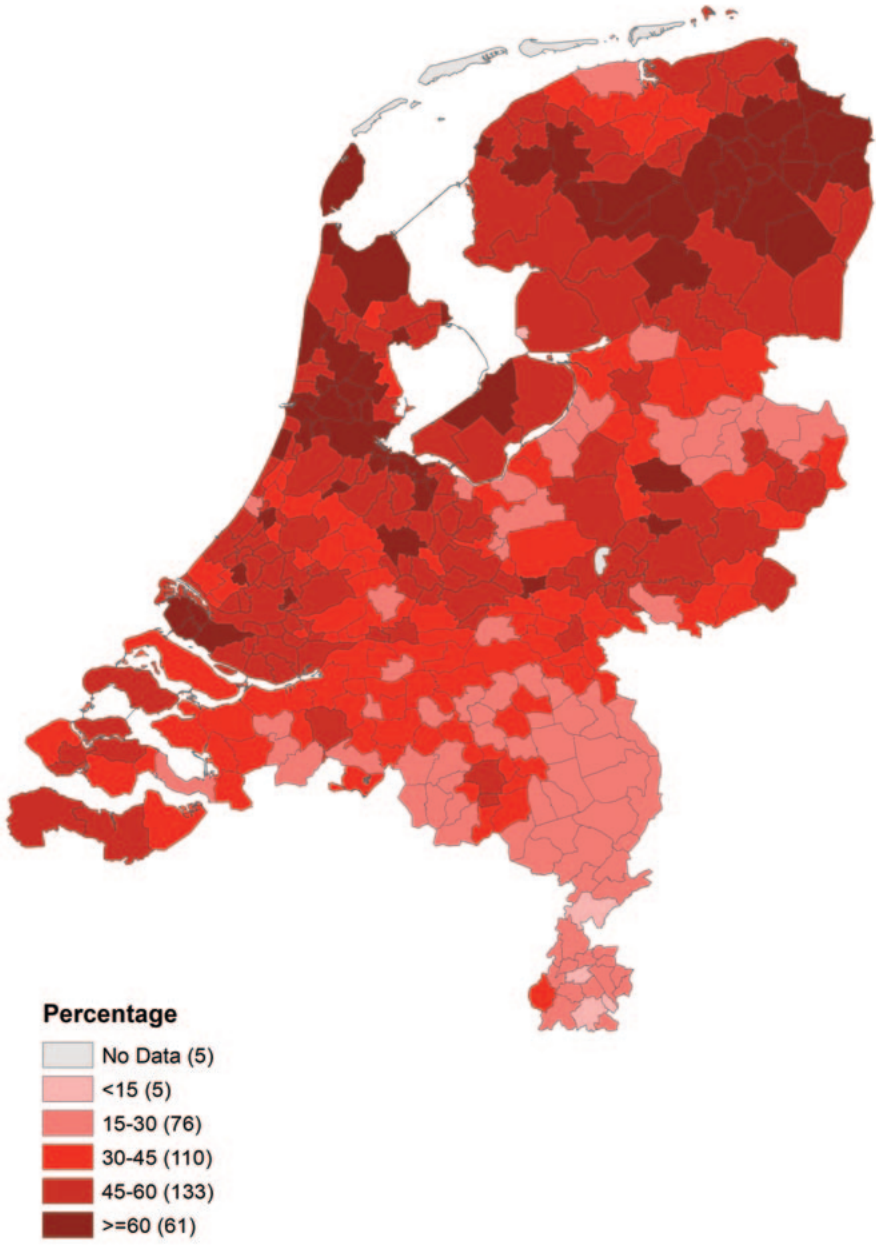
Map 6 The percentage of Muslims per municipality in 2010/15



Map 7 The percentage of unaffiliated per municipality in 1971



Map 8 The percentage of unaffiliated per municipality in 2010/15



BUDDHISTS

Buddhists are living dispersed over many municipalities. In 2010/15, there are no strong concentrations, and in only eight municipalities in different parts of the country is the proportion of Buddhists in the overall population greater than one percent (but less than two percent). Flevoland hosts the highest proportion of Buddhists of all provinces, Overijssel the lowest (Schmeets, 2016, p. 8).

JEWS

Only a few municipalities have more than one percent (religious) Jews in
410 2010/15: Amstelveen (2.9%), Heemstede (1.4%), and Noordwijkerhout (1.1%). Most Jews in absolute numbers are living in Amsterdam: about 5,900, i.e. 0.7% of its population, a painful contrast with the much larger number (more than eleven times as many) of (religious) Jews living there before WWII (Knippenberg, 1992, p. 208).

UNAFFILIATED

Maps 7 and 8 record the geographical distribution of the unaffiliated in 1971 and 2010/15. Comparing both maps, we see that, like an oil slick, non-affiliation has spread over the country and has reached regions which in 1971 had hardly any unaffiliated inhabitants, such as the (Roman Catholic) provinces of North Brabant and Limburg. North Brabant experienced an increase in unaffiliated inhabitants from 5 percent in 1971 to 39 percent in 2015, while the proportion in Limburg increased from 3 percent to 28 percent (Table 6).

Until the 1960s, the Roman Catholic pillar formed a strong barrier against secularization, due also to a relatively high fertility rate and strong geographical concentration. However, the crumbling of the Catholic pillar as a consequence of the cultural revolution of the 1960s encouraged secularization, which was no longer compensated by high fertility. A relatively strong growth in non-affiliation in the (former) Catholic areas was the consequence. However, the relatively late secularization in Catholic areas meant that even in 2010/15 many (former) Catholic areas had relatively low levels of non-affiliation. That North Brabant has been more secularized than Limburg has among other things to do with more economic development and more immigration from other parts of the country (and also from abroad).

Table 6 The percentage of unaffiliated per province, 1971-2015

	1971	2015	Change abs	1971-2015 %
Groningen	40	68	29	72
Friesland	32	57	25	80
Drenthe	28	62	34	123
Overijssel	21	42	22	105
Flevoland	22	55	34	154
Gelderland	15	46	32	213
Utrecht	24	54	31	131
North Holland	42	63	21	49
South Holland	30	52	22	75
Zeeland	13	47	33	250
North Brabant	5	39	34	726
Limburg	3	28	25	896

Sources: 1971 Census; Schmeets 2016 (population at least 18 year)

Both in 1971 and 2010/15, the highest proportions of unaffiliated people are found in the north (the provinces of Groningen, Friesland and Drenthe) and the north-west (the province of North Holland in particular). There is a long history behind this. Already at the end of the 19th century, concentrations of unaffiliated people occurred in the countryside of the provinces of Friesland and Groningen (Knippenberg, 1992; 1998). Strong social tensions between relatively rich farmers and poor agricultural laborers, and the emergence of socialism, can explain why many in this area left the church, which was dominated by farmers. The socialist movement, which had a very anti-church attitude in the beginning, functioned as an alternative religion for many malcontents. The highest percentages in 2010/15 are found in Menterwolde (84%) and Pekela (80%) in the province of Groningen. The relationship with socialism still holds. Leftist political parties such as the Labor Party, the Socialist Party and Green-Left are still overrepresented in this part of the country.

A second concentration of unaffiliated people was and still is the Zaanstreek, north-west of Amsterdam. As early as c. 1900, the laborers in this industrial region with strong social tensions already had great sympathy for the socialist movement and a very anti-church attitude. It is remarkable that in 2010/15 the municipalities of Oostzaan (78%) and Zaanstad (63%) are among those with the highest percentages of unaffiliated.

Although secularization in the Netherlands started in the countryside

of Friesland and Groningen, urbanization has been a major factor in the decline of traditional religion. In 1971, most cities had levels of unaffiliated far above the national average. Table 6 records the percentage of unaffiliated in all municipalities with more than 100,000 people (1971). Only the cities in the Roman Catholic south-east are (far) below the national figure (24%) in 1971. Amsterdam is on top (54%), followed by the city of Groningen (51%).

Table 7 Percentage of unaffiliated in 1971 and 2010/15 in cities

	1971	2010/15	change abs	1971-2010/15 %
Amsterdam	54	62	8	15
Groningen	51	72	21	40
Rotterdam	42	50	8	20
Haarlem	41	63	22	54
Enschede	39	57	18	48
The Hague	37	50	13	36
Dordrecht	36	57	21	58
Utrecht	29	61	32	108
Arnhem	29	59	30	104
Apeldoorn	26	53	27	105
Nijmegen	11	54	44	407
Eindhoven	10	46	36	344
Breda	8	45	37	459
Tilburg	4	40	36	840
Maastricht	3	32	29	891

Data sources: 1971 Census; Schmeets 2016 (population at least 18 year)

However, forty years later the picture has changed considerably. Big cities such as Rotterdam (50%) and The Hague (50%) show hardly any difference from the national figure (48%). The cities in the Roman Catholic south-east experienced a kind of pursuit race, which brought them almost to the national level (Eindhoven, Breda) or even above it (Nijmegen). Only Maastricht, the capital of Limburg, continued to lag behind. On the other hand, Amsterdam experienced relatively small growth in the percentage of unaffiliated and is no longer on top. That position has been taken over by the city of Groningen (72%). In general, the differences between the cities have been reduced.

At least three factors are responsible for these changes between 1971 and 2010/15. The first factor is the already mentioned crumbling of the

Roman Catholic pillar, which no longer held back the Catholic part of the population from secularization and ended its relatively high fertility. The second factor concerned the growth of suburbanization in the 1970s and 1980s and the internal migration from the western part of the country to the south (North Brabant) and east (Flevoland and Gelderland). In those movements, secularized people were overrepresented.

The third factor concerns the immigration of religious people (Muslims in particular) from abroad. The relatively low increase in unaffiliated inhabitants in the three big cities of Amsterdam, Rotterdam and The Hague certainly has to do with the immigration of Muslims. In 2010/15, the percentage of adherents of that religion had been increased to 12, 14 and 15 percent respectively. Moreover, The Hague in particular hosted a substantial minority of Hindus from Suriname, whereas Amsterdam received Christian Creoles and also Hindus from the same country. The city of Groningen, on the other hand, hardly experienced this kind of immigration (2% Muslims and 0.5% Hindus in 2010/15), what explains its top position in the non-affiliation table. Different kinds of Christian immigrants also strengthened this development. In Amsterdam, attendance in the immigrant churches is ten times as high as the attendance in the PKN churches. In Rotterdam, for instance, the Roman Catholic Cape Verdean parish is the biggest and most active of all Catholic parishes (De Hart, 2014).

The lowest levels of unaffiliated people are found in those areas where the proportions of Roman Catholics were high, i.e. in South and Middle Limburg, e.g. Simpelveld (8%) and Gulpen-Wittem (10%), in neighboring East Brabant, e.g. Someren (16%), and in Twente, e.g. Tubbergen (16%). The former island of Urk (2%) has by far the lowest level of all municipalities and represents those municipalities where orthodox and experiential Gereformeerden are dominating the local community, such as Bunschoten-Spakenburg (15%), Staphorst (19%) and Rijssen-Holten (19%).

ATTENDING A RELIGIOUS SERVICE

Map 9 summarizes all religious groups together by their (self-recorded) practice of attending religious services in 2010/15. The percentage of the municipal population that attend a religious service at least once a month is recorded. One look at the map makes it clear that religious services are most highly attended where the different kinds of Gereformeerden are living. Urk has the highest score with 94% of its population, followed by Bunschoten-Spakenburg (66%) and Staphorst (60%).

In general Protestants attend church more often than Catholics, and Gereformeerden more than the Dutch Reformed/PKN (Table 8). Also, those in the category 'Other religion' are regular church attenders. There are indications that these comprise mainly those who are affiliated to one of the many Pentecostal and Evangelical congregations, including many immigrant churches (Schmeets, 2016, p. 5). The Muslims are frequent mosque attenders, in particular when one bears in mind that according to the rules of Islam only men have the obligation to visit a mosque (Douwes et al., 2005). Most striking perhaps are the proportions of religiously affiliated people, Roman Catholics in particular, who seldom or never attend a religious service.

Table 8 The frequency of attending a religious service by religious affiliation in 2015 (%)

	at least once a week	2-3 times a month	once a month	less than once a month	seldom or never
Roman Catholic	6	5	6	17	65
Dutch Reformed/PKN	25	10	7	11	47
Gereformeerd	55	8	4	6	27
Islam	27	6	6	11	50
Hindu	6	5	5	16	68
Buddhist	10	4	6	14	66
Other religion	45	9	4	9	33
All (no religion included)	10	3	3	6	77

Source: Schmeets 2016; population at least 18 year

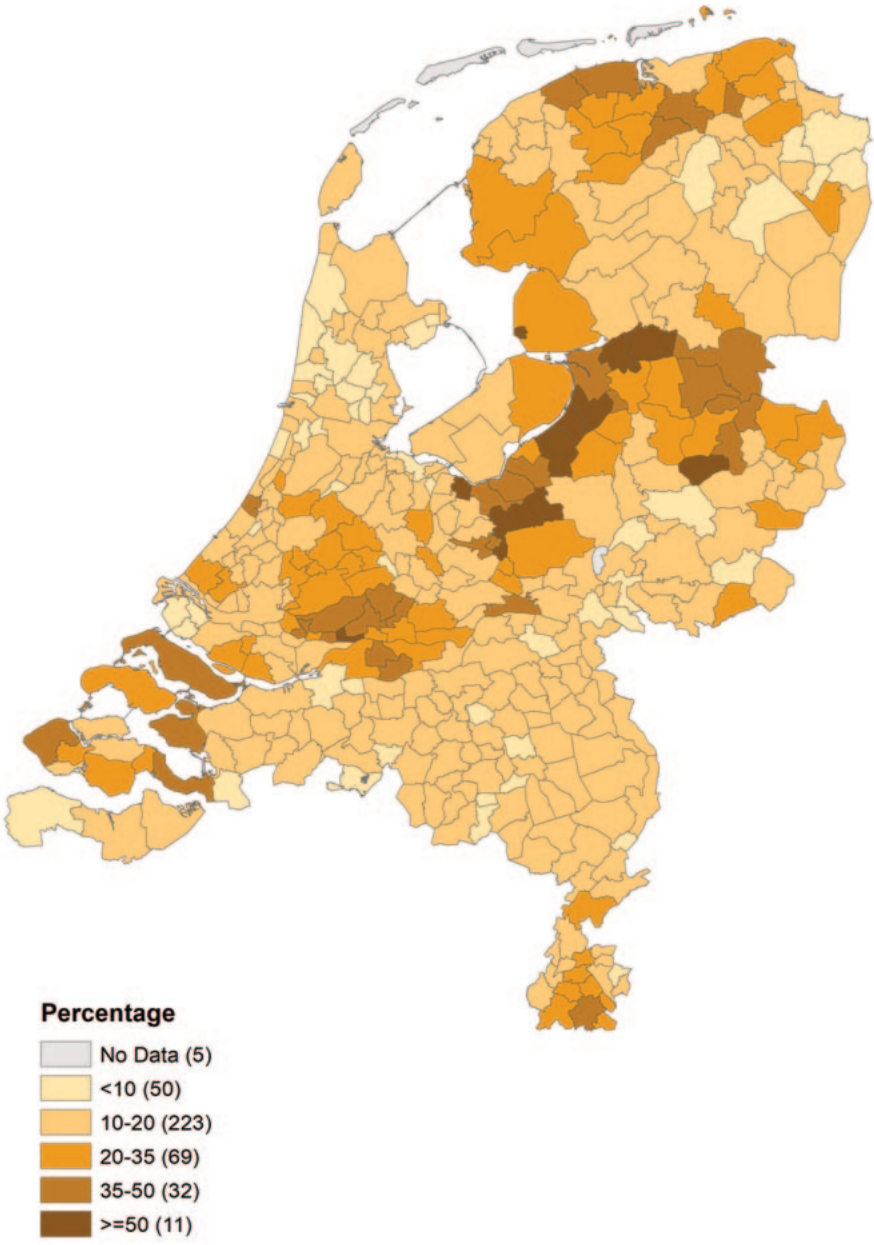
Since 1970, church attendance by those who are affiliated to one of the traditional churches has dropped considerably (Table 9), but the relative order of Gereformeerden, Dutch Reformed/PKN, and Roman Catholics has not changed.

*Table 9 Attending a religious service at least 2 times a month by religious affiliation, 1970-2015 *)*

	1970	1991	2015
Roman-Catholic	71	30	11
Dutch Reformed/PKN	50	43	35
Gereformeerd	89	73	63

Source: Becker & Vink 1994; Schmeets 2016
*) % population at least 17 year (1970, 1991) and at least 18 year (2015)

Map 9 The percentage of those who attend a religious service at least once a month per municipality in 2010/15



In the last half-century, the religious landscape of the Netherlands has changed considerably. The most remarkable change concerns the decline of traditional, institutional religion. In a recent book, and referring to the Roman Catholic Church in particular, De Groot (2018) even speaks about 'the liquidation of the church'. This metaphor corresponds with the fact that hundreds of Christian church buildings were allocated another non-religious purpose (as dwelling-places, hotels, cultural centers, bookshops, supermarkets, offices, museums, et cetera), or were simply demolished. Both mother churches are in trouble, the Roman Catholic Church more than the Protestant Church (PKN) since the Protestant members attend their church four times more than the Catholic members, but in both churches the declining trend has not stopped.

Outside these mother churches, however, there have been very different developments. 'Old' (liberal Protestant) denominations such as Arminians (Remonstranten) and Mennonites (Doopsgezinden) followed the path of both mother churches, whereas the more recent Evangelical and Pentecostal congregations experienced a stormy development. The orthodox-Calvinist (Gereformeerde) churches were somewhat in between: strong growth in the experiential (bevindelijke) churches (Gereformeerde Gemeenten (in Nederland) and Hersteld Hervormde Kerk); strong growth until 2005, but decline thereafter, in the liberated (vrijgemaakte) churches; and weak growth until 1990, followed by decline, in the Christelijke Gereformeerde churches.

The most spectacular change in the religious landscape concerned the growth of Islam, illustrated by the founding of about 475 mosques, serving about 1 million Muslims. Two other non-Christian religions experienced strong growth as well: Hinduism and Buddhism. If the growth of Islam and Hinduism is almost exclusively due to immigration from Muslim or (partly) Hindu countries (and a relatively high fertility), the growth of Buddhism can also be considered as an example of what has been called the 'spiritual turn' or 'spiritual revolution', the transformation of traditional religion into new, often hybrid forms of religiosity and spirituality, such as the New Age movement, which has been described as the searching for the divine self (Heelas & Woodhead, 2005; Houtman & Aupers, 2007; Aupers & Houtman, 2008). The vast majority of Dutch society supports the idea that the meaning of life should be found in the unique inner experience and the development of one's own abilities (De Hart, 2014b).

These developments have had consequences for the geography of the religions involved. Secularization reached regions that had previously resisted apostasy, such as the Catholic provinces of North Brabant and Limburg. In the big cities in the western part of the country, the speed of secularization slowed down, due to the arrival of relatively religious immigrants, Muslims and Hindus in particular, but also Protestants and Roman Catholics from Latin America and Africa. Amsterdam-Southeast (former Bijlmer) with 150 different churches (http://www.zuidoost.nl 2018) became a symbol of this new urban religiosity.

The different religions and denominations had their own geographical patterns, which in the case of the difference between Protestants and Roman Catholics dated four centuries back. In the current pattern of the unaffiliated with strong concentrations in south-east Friesland, south-east Groningen, and North Holland, 19th century roots were still recognisable. The different kinds of orthodox Calvinists (Gereformeerden) and PKN members are predominantly living in the so-called Protestantenband, from the isles of Zeeland to the northern parts of Friesland and Groningen. Within the Protestantenband a Refo-belt could be identified, the living area of the experiential (bevindelijke) Calvinists, which extended from the isles of Zeeland to Northern Overijssel (Staphorst). In the northern part of the Protestantenband, the liberated (vrijgemaakte) Gereformeerden were overrepresented.

The areas in which both kinds of Gereformeerden lived were also the areas where church attendance was relatively high, notwithstanding the enormous decline in church attendance between 1971 and 2016 even among these Gereformeerden.

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[7]

HILDE BRAS & BIANCA SUANET

Family systems and spousal age differences in the nineteenth- and early twentieth-century Netherlands

INTRODUCTION

The age difference between spouses is one of the most concrete and measurable indicators of the power relationship between men and women as it relates to marriage. Large age differences, particularly between an older husband and his younger wife, can be seen as an indication of patriarchal gender relations (Atkinson & Glass, 1985; Cain, 1993; Mitterauer & Sieder, 1983; Therborn, 2004; Wheeler & Gunter, 1987), meaning that women have less power and agency in the relationship. Such age differences may affect the quality of marital relations by impeding conjugal intimacy (Barbierbi & Hertrich, 2005) and the standard of marital sexuality (Mitterauer & Sieder, 1983). The age difference also reflects the extent to which the life courses of the two spouses were synchronous, i.e. whether or not they were generational peers and (could) share conjugal projects. This is particularly relevant in the context of fertility declines. The equality and intimacy between spouses necessary for facilitating discussions of sexual and reproductive matters can most easily be reached in couples formed of age peers (Fisher, 2006; Janssens, 2007; Safilios-Rothchild, 1972).

During the nineteenth and the first half of the twentieth century, spousal age differences in Western societies strongly declined (Van de Putte et al., 2009). This development was part of a set of related shifts in family patterns, including earlier and more universal marriage and declining fertility. In explaining the rise of marital age homogamy, previous authors have emphasized the effects of industrialization, rising standards of living and the increasing importance of education and employment on widening marriage horizons (Berardo, Appel & Berardo, 1993; Van de Putte, 2005). Others have stressed cultural reasons and pointed to the rise of a new, less

instrumental, and more egalitarian view on partner selection (Coontz, 2005; Van de Putte et al., 2009). However, these explanations, alone or in tandem, do not clarify the substantial spatial variation in spousal age differences that has been prevalent, despite a trend of decreasing age differences (Barbieri & Hertrich, 2005; Laslett, 1977; Casterline, Williams & McDonald, 1986; Van de Putte et al., 2009). The question of how these regional differences can be explained has potentially an important bearing on our understanding of spatio-temporal differences in fertility transitions.

The few studies that have considered spatial differences in spousal age gap in the past have mainly juxtaposed the (small) spousal age gaps in the West with the large one in the East (Hajnal, 1965; Laslett, 1977). However, recent historical demographic research increasingly shows the substantial regional variations in demographic behavior that also exist within Western (or for that matter Eastern) societies (Ruggles, 2012). Such 'differences in difference' may stem from cultural variations in household organization, or in other words, from different family systems (Bengtsson, Campbell & Lee et al., 2004; Chuang, Engelen & Wolf, 2006; Engelen & Hsieh, 2007; Lundh & Kurosu et al., 2014; Tsuya, Feng, Alter & Lee et al., 2010;). Family systems or family types can be seen as clusters of norms, values and practices surrounding family and kinship, which are geographically anchored and particular to a certain region (Das Gupta, 1999; Davis, 1955; Duranton, Rodríguez-Pose & Sandall, 2009; Hajnal, 1982; Kertzer, 1991; Lorimer, 1954; Skinner, 1997; Therborn, 2004; Todd, 1990). This chapter looks in detail at such cultural differences related to the institution of the family in order to explain regional variations in spousal age gaps in the 19th- and early 20th-century Netherlands. We use a classification of family systems formulated by Todd (1985; 1990) who stressed the extent of liberty versus authority in parent-child relations and the degree of equality versus inequality in sibling relations as the defining blocks of family systems. Concretely, we study the relation between family systems and same-age, husband-older and wife-older marriages on the basis of a large-scale database, which contains indexes of more than a million marriage certificates related to five of the eleven Dutch provinces during the period 1812-1922. In addition to the household information from the marriage records, macro-level information on the religious and demographic structure of the marriage communities was added, as well as community-level indicators of the extant family system. Specifically, we include variables indicating meeting and courting practices from a unique Folklore Survey. We

also include the type of inheritance system in the community. Our dataset thus allows for a large-scale, comparative, and multilevel approach to the relationship between local family systems and spousal age differences for a substantial part of the Dutch population for almost a century.

In the next section, we present mechanisms that link characteristics of family systems to spousal age differences, building further on the work of Emmanuel Todd (1985; 1990). We then describe the case of the Netherlands, and its family types, and formulate hypotheses. Next, our data are introduced and we describe our measures and methods. In order to obtain a first impression of regional differences in spousal age gaps at marriage, we present graphs showing percentages of same-age marriages, husband-older marriages, and wife-older marriages over time in the five Dutch provinces under study. Through a series of two-level logistic models, we then test our hypotheses and assess the effects of family system attributes, and of other community characteristics, on the different types of marriage. In the final section, we summarize and discuss our findings.

BACKGROUND

DETERMINANTS OF SPOUSAL AGE DIFFERENCES

Determinants of spousal age differences or similarities (i.e. marital age heterogamy or homogamy) can be divided into three clusters: structural constraints of the marriage market, third-party influences, and individual preferences (Kalmijn, 1998). Structural constraints comprise the likelihood of meeting a potential spouse on the marriage market in a given locality, at least long enough to have some sense of whether they would be suitable, and factors dealing with the degree to which marriage horizons expanded or shrank (Van Leeuwen & Maas, 2005, p. 5). Naturally, in larger local marriage markets it is easier to meet someone of one's own age. When transportation and infrastructure facilities improve, meeting a larger number of potential spouses becomes possible. Secondly, social pressure from parents, peers and the community may favor partners from some age groups and reject others. The third group deals with personal agency or autonomy – the extent to which one can resist such pressure and cultivate one´s personal preferences.

It might be argued that family systems shape all three clusters of determinants. They mold local opportunities for meeting prospective spouses,

are associated – via the degree of authority versus liberty in parental-offspring relations – with the degree of social pressure, and linked to this, also to the possibilities for individual agency and the development of personal preferences. Of course, the availability of meeting opportunities might also result from purely demographic mechanisms. The age structure of the marriage market may simply make meeting and marrying an age peer easier or more difficult. Although previous research by Casterline, Williams and McDonalds (1986) showed that the variation in age-difference distributions in present-day developing societies was mainly related to the society's kinship structure, and that age structure constraints on the pool of possible matches was less important, we will have to take (changes in) age structure constraints of the marriage market into account. However, for the remainder of this section, we will focus on elaborating how meeting opportunities, social norms and personal autonomy are shaped by family systems.

FAMILY SYSTEMS AND SPOUSAL AGE DIFFERENCES

Family systems, defined as clusters of norms, values, and practices surrounding family and kinship, can be seen, to use Wallerstein's (1991) term, as 'geocultures' (see also Therborn, 2004). It has been argued that family systems have been in place for a long time, at least since the Middle Ages, and that they have been resilient in the face of social change, having a strong path-dependent nature. Even if concrete attributes of family types, such as multi-generational households or impartible inheritance, are no longer visible or existent, their underlying norms and values may have persisted until the present day. Such continuity may develop as a consequence of socialization and transmission of family traditions from parents to children and / or through intermediate factors, such as political or economic institutions that have been shaped by family structures and continue to influence our society and behaviors (Duranton, Rodríguez-Pose & Sandall, 2009; Todd, 1985). There are several definitions of family systems, stressing different aspects and using different characterizations (Das Gupta, 1997; Dalla Zuanna, 2001; Micheli, 2000; Reher, 1998; Skinner, 1997; Therborn, 2004; Todd, 1985; 1990; 2011). In this chapter, we apply the conceptualization of family types by Emmanuel Todd (1985) in his book, *The Explanation of Ideology: Family Structures and Social Systems,* where he follows up on earlier work by Le Play (1884).

According to Todd, family systems vary along two axes indicating *lib-*

erty versus authority on the one hand and *equality versus inequality* on the other. Relations between father and son determine people's concept of liberty or its opposite; the bond between brothers creates an idea of equality or of inequality (Todd, 1985). Four family systems are accordingly distinguished: *the absolute nuclear family*, which combines liberal parent-child relations and inegalitarian sibling ties, *the egalitarian nuclear family*, which combines liberal parent-child relations with egalitarian sibling relations, *the authoritarian or stem family*, which combines authoritarian parent-child and inegalitarian sibling relations, and the communitarian family, where authoritarian parent-child relations are combined with egalitarian sibling relations (see Table 1, left panel). Thus, families are thought to diverge in their approach to intergenerational and generational (sibling) relations.

But how does this influence the power balance between men and women? According to Todd, both absolute and egalitarian nuclear family systems, fitting in with systems of bilateral inheritance, give equal weight to maternal and paternal roles, while women are eligible to receive part of the inheritance. A nuclear household is a situation of exclusive dialog between a man and woman, implying some degree of equality. The principle of symmetry between brothers has consequences for male-female relations, which differ between the two nuclear models (absolute and egalitarian). The absolute family type, which has no interest in equality or symmetry, has, according to Todd, in practice taken equality between the sexes further than the 'egalitarian' family. The principle of solidarity between brothers implies masculine solidarity and reinforces inequality between the sexes. The absolute nuclear family on the other hand is indifferent to equality between brothers and to male solidarity. It leads to the most egalitarian conjugal bonds of all family systems. An examination by Todd of the ages at marriage of husband and wife showed that the age difference between spouses is greater in egalitarian nuclear systems than in absolute nuclear family systems (Todd, 1985).

The authoritarian family has the most unequal parent-child relations and is contradictory in the sense that it emphasizes continuity in the male line yet gives women an important role through consciously exalting the power of the father and unconsciously elevating respect for the mother (Todd, 1985). This may also translate into inegalitarian, yet contradictory, spousal relations. Moreover, the authoritarian family produces very variable marriage ages. Only one son or daughter is actually required to marry; this child, remaining under the protection of the parents, can marry

young. The other siblings have to make their own way and their marriage ages might diverge considerably. Thus, the variation in marriage ages is wide and it is likely that the same will be true of the range in spousal age differences. Empirical research on present-day developing countries shows that in patriarchal societies and in societies organized by patrilineal kinship organization the age difference is much larger than in societies where Western forms of family formation are more common (Casterline, Williams & McDonald, 1986).

Table 1. Family types and their association with spousal relations and spousal age differences

Family type	**Parent-child relations**	**Sibling relations**	**Spousal relations**	**Marriage age**	**Spousal age gap**	**Age homogamy**
Authoritarian family	Authoritarian	Unequal	Inegalitarian	Variable	Large	-
Egalitarian nuclear family	Liberal / authoritarian	Equal	Egalitarian/ inegalitarian	High	Medium	+/-
Absolute nuclear family	Liberal	Indifferent	Egalitarian	High	Small	+

Source: based on Todd (1985), additional columns by the authors

In order to assess the association between family systems and spousal age differences, the crucial issue is how to measure the main dimensions of family systems, the degree of liberty and of equality. First, Todd measures the extent of liberty versus authority by the speed and extent of the process of children leaving home. This varies, according to him, between societies or regions characterized by liberal ties where children depart early and form an independent household through marriage, and societies or regions characterized by authoritarian ties where the process of leaving home is protracted or does not occur at all and the child continues to live with the parents, forming a vertical relationship within an extended family group. As an indicator, Todd (1990) used regional percentages of multigenerational households. However there are several other ways of measuring liberty and authority in parent-child relations; in fact, what is needed is data that deal with the degree of normative control by parents over their children. Since we study as our main variable of interest an attribute of the marriage behavior of children, i.e. spousal age differences, it is better to measure liberty in parent-child relations *before* marriage and not, as Todd does, at the moment of marriage itself. In this chapter we specifically exploit data on the meeting and courting practices of unmarried young-

sters as indicators of the degree of liberty versus authority in parent-child relations. Courting practices may be highly supervised and monitored by parents, or occur relatively free from parental and communal supervision. Moreover, they influenced the opportunities of young people to meet prospective marriage partners and defined their opportunities in time and space for searching for similar or suitable spouses.

Secondly, equality or inequality in sibling ties is measured by Todd by the rules of inheritance in a region, which may vary between egalitarian ties, in cases where inheritance is fully partible, and inegalitarian ties, when property is passed on to just one child (impartible inheritance). Todd also distinguishes regions that are marked by indifference, where parents expect their children to set up their own household but divide their property in a will or testament in their own way, without being bound by precise conventions. We follow Todd's footsteps where inheritance practices are used to indicate the equality-inequality dimension of family systems. In the next section, we describe what is known about the content and spatial variation of inheritance customs and courting practices in the five Dutch provinces under study in this paper and we then formulate hypotheses.

REGIONAL DIFFERENCES IN THE NETHERLANDS

Since the sixteenth century, the Netherlands combined a rural, agricultural economy with a highly developed urban services sector. Industrialization came relatively late to the Netherlands, starting off around 1860 in the urban heartland of Holland, and was characterized above all by an intensification of the tertiary sector (Van Zanden & Van Riel, 2004). In the 1890s this process accelerated, accompanied by urbanization, massive rural-urban migration and the broadening of urban labor markets. In the five provinces for which we have data – Groningen, Overijssel, Gelderland, Zeeland, and Limburg – the pace of industrialization was considerably slower than in urbanized Holland. Although in the provincial towns in these regions the services sector grew and a number of (rural) industries developed, all five regions remained highly dependent on their agricultural economies during the period 1840-1925.

In the eastern part of the Netherlands, stem families and impartible inheritance had been common at least since the sixteenth century (Verduin, 1985). In our dataset, a number of communities from the regions of Salland, Twente and the Achterhoek in the provinces of Overijssel and Gel-

derland belonged to this impartible inheritance area. Inheritance customs in Groningen and Zeeland, in contrast, were under the reign of partible inheritance law. In the sea clay provinces of Zeeland and Groningen, in which farms were large, parents often transmitted their property to just one child while compensating the other children, making for an inegalitarian or at least indifferent type of inheritance. Thus, these provinces can, on the basis of their system of property devolution, be classified as absolute nuclear. The larger part of the southern province of Limburg had an egalitarian nuclear family system with partible inheritance. Children often waited long and married late in order to receive their share of the inheritance or family fund (Klep, 2004). Extended households consisting of unmarried co-residing siblings were the unintended effect of this fully partible system of property devolution (Verduin, 1985).

Several customs and practices of meeting and courting existed in the Netherlands, as in other European societies (Wikman, 1937). Courting practices were a means of selecting partners. Except for the nobility and the elite, marriages in the Netherlands were not arranged. However, particularly for farmers, instrumental motivations were at the heart of partner selection and marriage well into the twentieth century. One had to marry a partner from an equally sized farm. More generally, the criteria of marrying into one's own social class and religious group, as well as within the village, were applicable to all.

However, within their group, young people had opportunities to choose. Several courtship rituals, places and events allowed youngsters to meet, such as weddings and funerals, annual markets or fairs, and during carnival, spring or summer festivals. Also, youngsters gathered at home or in the neighborhood. The most striking aspect in which courting rituals varied was their degree of parental and (public) control. Some courtship customs were ritualized public meeting events that were firmly under parental and social control. These included all sorts of annual events, including fairs, markets, and the like, where youngsters could meet (in the presence of the elder generation). Also, visits of boys to the houses of girls, which in some cases led to sexual activities (bundling), were most of the time under the control of parents. The largest part of the afternoon and evening that the young couple spent together was in the company of family, who had a large say in approving the presence of the visiting boy. Other courting practices allowed youngsters more time and more freedom to seek and be together with prospective partners. Among these were special places in villages and towns where youngsters were known to get

together without parental supervision. This might be a certain street, or a place in the field outside the village where young people would play games, covering each other with freshly mown grass ('grazelen'). Another custom that was under less parental supervision was the 'peer group meeting at home'. These could be spinning bees, where girls span wool and the boys arrived later in the evening to play games, which mostly took place during winter nights in January and February and persisted particularly in the eastern and southern provinces. They could also be peer group evenings that were not connected to agricultural activities (De Jager, 1981).

How important were these courting practices for actually finding a spouse? It has been noted that for some social groups, particularly for farmers' children, who did not have much leisure time because of their time-consuming occupation, annual events and other courting customs might have been even more essential for meeting prospective partners than for other social groups. Moreover, over time, most of these courting practices dwindled, earlier in towns than in villages and persisting longest in remote areas, and earlier among the middle classes than among farmers and farm laboring folk. More modern 'engagement' and dating rituals replaced these traditional courting practices (De Jager, 1981).

HYPOTHESES

On the basis of the above, the following hypotheses are formulated:

- We expect that in communities with impartible inheritance, the chances of same-age marriage are lower, while chances of husband-older and wife-older marriages are likely higher (H1).
- We expect that in communities where courting practices comprised ritualized, publicly supervised annual events (such as markets and fairs) – indicating high parental authority – the chances of same-age marriages were lower and the chances of husband-older and wife-older marriage were higher (H2).
- We expect that in communities with courting practices that offered youngsters the freedom to be together for an extended period without parental supervision, such as peer group gatherings at home or separate local meeting places – indicating liberal parent-child relations – the chances of same-age marriage are expected to be higher, while the chances of wife-older and husband-older marriages are expected to be lower (H3).

DATA

The data for this study are taken from GENLIAS, a large-scale database consisting of indexes to all marriage certificates that were contracted between 1812 and 1922 in five Dutch provinces. Data are available for the provinces of Groningen (N=208,000), Overijssel (N=221,000), Gelderland (327,000), Zeeland (164,000) and Limburg (190,000). In total, there are 1,110,878 marriage certificates within the dataset. For our study, we selected only first marriages that were contracted before the bride or bridegroom were 40 years old. The upper limit of 40 years was chosen because other
430 mechanisms might be at work when marrying after the age of 40 (since reproduction is less of an issue). Additionally, marriages after the age of 40 were relatively rare; in our population, only 2.5 percent married after this age.

For individuals for whom a marriage certificate was available, data on their sibling set was created in three steps. In the first step, the marriage certificate of the research person was linked to the marriage certificate of the parents. This link was made on the basis of the first and last name of both parents as registered on the marriage certificate of the parents and the child. The age of the child and the year in which the child married were used to determine how long the parents are likely to have been married, by considering the period in which people can give birth to children. Parents and children were linked by considering all data that were available for the five provinces. In the dataset constructed in this way, each record has information on the bride, bridegroom and both sets of parents. The nationwide registration system in the Netherlands was not introduced until 1812 and therefore we rely on data after 1840 in which a 28-year difference is taken into account in order to allow for intergenerational linkage. Data on the two generations are most often available for those who married in 1900 or later. The final intergenerational database consisted of 946,943 marrying persons.

In a second step, 404,872 sets of siblings with the same parents were created. Since only married siblings are included in the dataset, there is systematic under-representation of the number of siblings within each family. If remaining single was more common in some social groups, such as Catholic families, this could result in a substantial bias in the estimates. In order to determine whether or not this causes a problem, a comparison

was made with the marriages of complete sibling sets in 237 small and large families in the vicinity of Akersloot. This comparison showed that there were no significant differences in the percentage of never-married siblings between large and small families or between Catholic and Protestant families. In other words, the incorporation of only married respondents in our sample does not result in a bias with regard to religion in the estimation of the total number of siblings in a family across different types of families.

Next, community characteristics were linked to the GENLIAS database. A number of these, including religious structure (% of Catholics and % of Orthodox Protestants), net migration, mobility, birth rate, urbanization, and population size, were derived from the *Historical Database of Dutch Municipalities (HDNG)*. Data on communities' inheritance practices were taken from monographs and regional surveys of notaries concerning the type of property transfer (Best, 1941; Baert, 1949). Data on customs of meeting and courting were derived from the *Folklore Questionnaires* [*Volkskundevragenlijsten*] (1989), which were collected by the *Dutch Meertens Institute* between 1934 and 1988.

These questionnaires were sent out to approximately 1,200 informants from mainly rural municipalities scattered throughout the Netherlands. The informants filled out the questionnaires with pen or pencil, while some were typed out. With informants usually being elderly people in a municipality, the information broadly covers the first half of the twentieth century.

Such systematic information on cultural rituals and customs in their local contexts is hard to find in any other source, though the questionnaires also have their limitations. The main problem is that informants had to report back about beliefs that were supposed to be held generally or by certain social groups in the municipality. The larger the municipality, the more difficult it was for one respondent to be aware of the existence of beliefs or customs in different subgroups. However, in pre-war Dutch rural municipalities, community cultures were still strong and, although divided across class and religious lines, often quite homogeneous. Moreover, the informants were frequently the village notables, such as heads of schools, teachers and notaries, who came into contact with people from all classes and denominations. Another limitation was that the answers to the questions were not closed or pre-defined, so that informants were basically free to decide how to respond to a question. This has the advantage of allowing for lengthy, interesting observations, but among the disadvan-

tages are the very dissimilar answers which then had to be standardized and coded by the researchers. Questions to which the answers were not filled in but were left blank also posed a problem, for it was not always clear whether the informant had not answered because he or she did not know the answer or whether the answer was negative and there was simply nothing to report. Moreover 'not responding' was very much clustered within respondents; 'unknowns' correlated heavily across the questions and caused problems with multicollinearity in the regression analyses. Therefore in the end we were unable to include all questions in the analyses and had to select a number of them.

For this paper, questionnaire #40 on dating practices, which was sent out in 1971, was used. The questionnaire contained 56 questions concern-

ing, among other things, the ages at which boys and girls could start courting and whether and how this was made visible in terms of clothing or hairstyle, questions about visiting (bundling) where the girl waited in her room at home during the afternoon or at night for a visit from a boy, questions about peer group gatherings or spinning bees, questions about annual events such as markets and fairs where youngsters could meet, and about visiting patterns and the extent of parental supervision, and finally questions about the existence (generally, and in particular social groups) of more modern engagement practices.

MEASUREMENTS

In our analysis, the chances of contracting 1) same-age, 2) husband-older and 3) wife-older marriages are the main dependent variables. Our key independent variables are the regional family system characteristics, i.e. the inheritance system and the courting practices in the community. Although partible inheritance was stipulated in the civil code of the Netherlands in the nineteenth century, several communities adhered to their tradition of impartible inheritance. A dichotomous variable was constructed to indicate whether or not the marriage took place in a community practicing impartible inheritance. In the province of Overijssel, 67% of all brides and grooms lived in a community with impartible inheritance; in Gelderland, this was about one-fifth. In the other three provinces, only partible inheritance was practiced (see Table 1).

We included the following courting variables, 1a/b) the ages at entry into courting of girls and boys; 2) the existence of annual meeting events, such as markets and fairs in the community; 3) the existence of local meet-

Table 1. Descriptive statistics of the dependent and independent variables

	Zeeland	Groningen	Limburg	Overijssel	Gelderland	
Same age marriages (< 2 year differences between spouses)	48%	45%	47%	44%	38%	***
Husband older marriages (husband > 2 years older)	41%	42%	38%	44%	49%	***
Wife older marriages (wife > 2 years older)	11%	13%	15%	12%	13%	***
Mean age at marriage husband	26.1	26.5	27.6	26.9	27.8	***
Mean age at marriage wife	24.1	24.6	26.2	24.6	25.1	***
Mean age difference (age husband- age wife)	2.0	1.9	1.4	2.3	2.7	***
Individual and parental household characteristics						
Sex (1=male)	50%	50%	50%	50%	50%	
Sibship size	4.0	3.8	3.6	3.6	3.9	***
Birth order	2.4	2.3	2.2	2.2	2.4	***
Social class father						
– Higher and middle classes (ref.)	16%	29%	14%	24%	18%	***
– Farmers and fishermen	13%	14%	26%	30%	29%	
– Lower skilled and unskilled laborers	5%	16%	8%	24%	16%	
– Farm laborers	29%	30%	7%	16%	27%	
– Father's occupation unknown	39%	10%	44%	7%	10%	
Migration (0=no, 1=yes)	41%	59%	35%	37%	43%	***
Marriage year	1883	1886	1885	1888	1888	***
Community characteristics						
Proportion of Catholics %	26%	7%	95%	27%	21%	***
Proportion of Orthodox Protestants %	7%	14%	0%	6%	6%	***
Urban (0=no, 1=yes)	0%	40%	0%	0%	9%	***
Net migration	-7.2	-2.8	-.6	1.0	-2.9	***
Mobility	103.7	110.5	93.7	103.1	104.9	***
Population size	2855.1	19386.4	12431.5	12973.5	8670.1	***
Birthrate	36.2	31.2	31.7	31.7	31.2	***
Impartible inheritance (0=no, 1=yes)	0%	0%	0%	67%	19%	***
Age at entry courtship of girls						***
– 17 years or younger	5%	63%	0%	24%	7%	
– 18-19 years	25%	28%	16%	39%	39%	
– 20 years or older	42%	5%	53%	31%	40%	
– Unknown	28%	5%	31%	7%	15%	
Age at entry courtship of boys						
– 17 years or younger	6%	18%	0%	0%	3%	***
– 18-19 years	16%	30%	14%	41%	22%	
– 20 years or older	50%	41%	52%	31%	59%	
– Unknown	28%	12%	35%	28%	16%	
Girls stayed at home						***
– Yes	25%	19%	19%	38%	22%	
– No	32%	33%	44%	54%	42%	
– Unknown	43%	48%	37%	8%	36%	
Peer group gatherings at home (0=no, 1=yes)	30%	23%	39%	85%	24%	***
Existence of annual meeting events (0=no or unknown, 1=yes)	82%	52%	50%	74%	62%	***
Female agency in courting						
– Yes, by girl	28%	57%	26%	35%	24%	***
– Yes, by parents and family	0%	6%	9%	15%	11%	
– No or unknown	72%	37%	65%	50%	65%	
Local meeting places (0=no or unknown, 1=yes)	78%	66%	15%	54%	29%	***
Supervision of parents in visits						
Yes	9%	44%	0%	11%	2%	***
No, parents absent	59%	29%	52%	66%	66%	
Unknown or inconsistent	33%	27%	48%	23%	32%	
N communities	153					
N individuals	321016					

Source: Database Genlias_2007_3
* significant at 0.05 level, ** significant at 0.01 level, *** significant at 0.001 level.

ing places where youngsters could be together without communal and parental supervision; and 4) the existence of a communal custom of peer group gatherings without parental supervision. The answers of the informants on these sub-questions were coded as 'yes', 'no', or 'unknown'.

As control variables we included first of all a number of characteristics pertaining to regions and communities. We included a variable for the province in which the marriage took place (Groningen, Overijssel, Gelderland, Zeeland, and Limburg). As community characteristics of the marriage municipality, we incorporated measurements related to the religious climate and the degree of urbanization of the community. As an indicator for the religious climate of the marriage community, we included the percentage of Catholics in the population and the percentage of voters for the main orthodox Calvinist party, the SGP, for the municipal and provincial elections in 1935 (1935 being the first year in which it was possible to chart voters for this party). Municipalities were classified as urban or rural on the basis of information on city rights (Suanet & Bras, 2010; 2014).

With regard to the family characteristics, we included the number of siblings, the birth order of the research person within the sibling set, and the parental social class. As stated above, the measure of the number of siblings is based on those siblings who ever married. The social class of the parental family is based on the occupation of the father; occupations were coded on the basis of the HISCO classification system, a historical classification of occupations that is synchronized with the International Standard Classification of Occupations. These occupational codes have been grouped into occupational categories according to the HISCLASS scheme, as proposed by Van Leeuwen & Maas (2002; 2011), and consisted of seven categories: higher managers and professionals; lower managers and professionals including clerks and salesmen; foremen and skilled laborers; farmers and fisherman; semi-skilled laborers; unskilled laborers; and farm laborers. Subsequently, several categories were collapsed and we here distinguish between five occupational categories: 1) higher and middle classes (higher managers and professionals combined with clerks and salesmen); 2) farmers and fisherman, 3) skilled and unskilled laborers (skilled, semi-skilled and unskilled workers); 4) farm laborers; and 5) father's occupation unknown. We also included a variable measuring whether or not research persons had migrated by comparing their birth and marriage communities (0 = no difference between the birth and marriage community, 1 = migration, i.e. different birth and marriage communities). Those individuals who moved away and married outside the

provinces of observation cannot be studied. Thus, although the area studied is large, our results might partly suffer from selection bias with regard to out-migration.

Finally, we also controlled for period effects by including dummies for the marriage year (1840-1859, 1860-1879, 1880-1899, and 1900-1925).

METHODS

We first conducted descriptive analyses of regional (i.e. provincial) trends of same-age, husband-older and wife-older marriages. Subsequently, we performed a series of multivariate multilevel logistic regression models in order to estimate the effects of community characteristics on each of these types of marriage. Multilevel models are based on the idea that individuals within specific categories, for example those who marry within the same community, are more similar as a result of observed and unobserved characteristics. If no random term was included, intra-community correlation could result in biased standard errors and therefore in incorrect significance tests of parameters. The advantage of multilevel models is therefore that we can allow for dependency between observations from the same community, even if these are unmeasured by the community characteristics included in the model.

RESULTS

REGIONAL TRENDS IN SAME-AGE, HUSBAND-OLDER AND WIFE-OLDER MARRIAGES

In Figure 1 the development of same-age marriages (marriages between partners with an age difference of two years or less) between 1840 and 1913 is presented for the five provinces. Clearly, we observe a steady increase in same-age marriages from 1875 onward. This rise is visible for all provinces. Strikingly, there are substantial and continuing differences in the level of same-age marriages. For instance, around 1895 the share of same-age marriages differs between 53% of all marriages in the western province of Zeeland and 38% in the eastern, inland province of Gelderland. In general, the provinces with an absolute nuclear family system (Zeeland, Groningen) and with an egalitarian nuclear family system (Limburg) have the

Figure 1. Percentage of Same-Age Marriages by Region and Period of Marriage, First Marriages

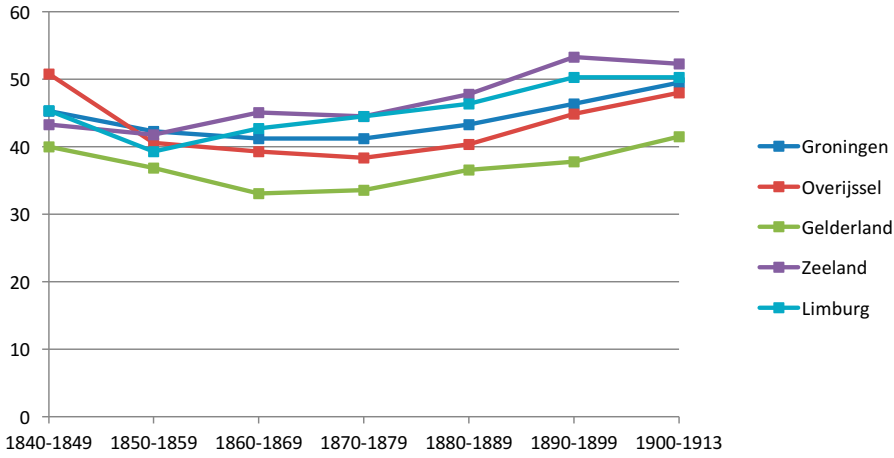
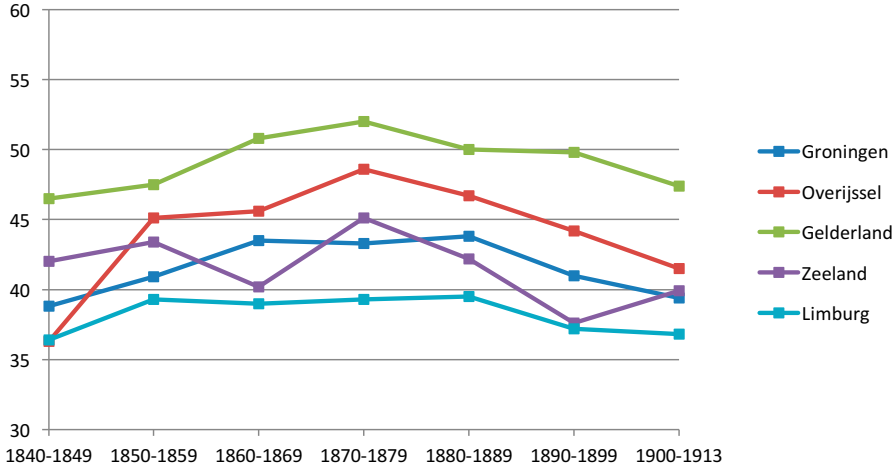


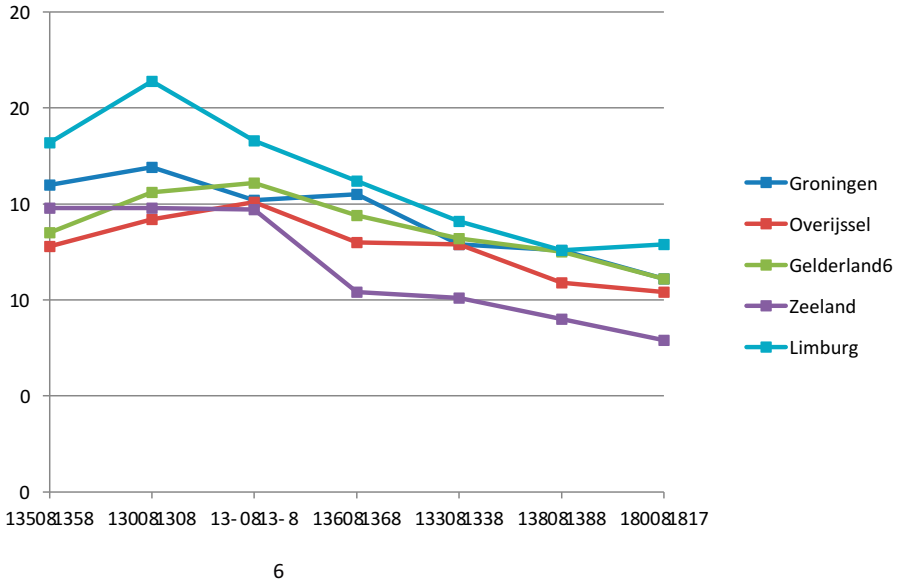
Figure 2. Percentage of Husband-Older Marriages by Region and Period of Marriage, First Marriages



highest rates of age-homogamy. In contrast, those provinces containing substantial regions with an authoritarian family system (Overijssel, Gelderland) have lower shares of age peer marriages.

Figure 2 shows a somewhat different trend for the incidence of husband-older marriages. In general, a rise to a peak around 1875 can be noted, followed by a decline. In terms of provincial levels, the trend lines show an almost reversed picture from that of the age-homogamous marriages.

Figure 3. Percentage of Wife-Older Marriages by Region and Period of Marriage, First Marriages



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However, the Catholic province of Limburg, with an egalitarian nuclear family system, has by far the lowest incidence of husband-older marriages.

Wife-older marriages, on average about 12% of all marriages, were very much on the decline from the middle of the nineteenth century onward, decreasing from 21% in Limburg in 1855 to 7% in Zeeland in 1905 (see Figure 3). Intriguingly, the ordering of the provinces is different for this type of marriage, and is not easily relatable to the type of family system. The egalitarian family system in Limburg, but also the absolute nuclear and authoritarian family systems in Gelderland, have higher rates in comparison with Overijssel and particularly with Zeeland. In the multivariate analyses we will see whether and in what ways family system characteristics determined these types of marriage.

Determinants of Same-Age, Husband-Older and Wife-Older Marriages

In Table 2, we present the results of our two-level logistic regressions for same-age, husband-older and wife-older marriages. In model 1, we observe that the chances of a same-age marriage are significantly smaller for couples in the northern province of Groningen (absolute nuclear) and in

the eastern (stem family) areas of Gelderland and Overijssel compared to those in Zeeland. Limburg (egalitarian nuclear) does not differ significantly from Zeeland. We also observe that several of the family system characteristics have a significant effect on the chances of a same-age marriage. Marrying in a community with an impartible inheritance system is, as we expected, *less often* associated with marrying an age peer. The same held true for those marrying in communities where girls were allowed to start dating only after the age of 20, showing the prohibitive effects of strong parental control over courtship and for places where youngsters could (only) meet prospective spouses at annual meeting events, such as fairs and markets. Such events were under strict public and parental surveillance and youngsters were often accompanied by chaperones, so these communities probably did not offer much leeway for really searching for equitable partners or developing romantic relationships. The existence of the custom of peer group gatherings, often in the form of spinning bees, did have – as we expected – a positive effect on the chance of finding a partner of approximately the same age.

A number of community-level variables are also important predictors of same-age marriages. In terms of temporal differences in the chances of same-age marriage, we see the rising trend in age homogamy reflected in the coefficients for marriage year. Living in a community with a higher percentage of Orthodox Protestants increased the likelihood of marrying an age peer. Strangely enough, we find that the chance of a same-age marriage is lower in urban than in rural places. Marrying an age peer more often occurred in places with a high in- and outflow of migrants and in places with larger population sizes. Thus the urban effect probably captures small urban places with traditional city rights.

There were also important social class differentials in the probability of contracting a same-age marriage. Both the higher and middle classes and the laborers and farm laborers had higher chances of doing so in comparison with persons whose father's occupation was unknown, while brides and grooms from a farming background had a significantly smaller chance of marrying an age peer.

In model 2, we present the determinants of husband-older marriages (marriages in which the husband was more than two years older than his wife). We find that the chances of contracting an husband-older marriage are higher for women from the absolute nuclear family system province of Groningen and the stem family provinces of Overijssel and Gelderland

Table 2. Two-Level Logistic Regression Analyses predicting Same-Age, Husband-Older, and Wife-Older Marriages

	Same-Age		Husband-Older		Wife-Older	
	B	**Sig**	**B**	**Sig**	**B**	**Sig**
Intercept	-0.11		0.09	***	0.08	***
Sibship size	0.01	***	0.00	**	0.00	***
Birth rank	0.02	***	0.00	***	0.00	***
Regions (Zeeland-=ref.)						
Groningen	-0.26	***	0.07	*	0.06	*
Overijssel	-0.29	***	0.08	**	0.07	
Gelderland	-0.42	***	0.06	***	0.06	***
Limburg	0.01		0.08	*	0.06	***
Fathers occupation (unknown=ref.)						
Higher or middle class occupations	0.13	***	0.01	***	0.01	#
Farmers	-0.03	**	0.01	***	0.01	***
Laborers	0.19	***	0.01	***	0.01	
Farm laborers	0.12	***	0.01	***	0.01	
Migration(1=yes)	-0.09	***	0.01	***	0.01	***
Marriage year (1900-1925=ref.)						
1840-1859	-0.14	***	0.02		0.02	***
1860-1879	-0.22	***	0.01	***	0.01	***
1880-1899	-0.11	***	0.01	***	0.01	***
Community characteristics			0.06			
% Catholic	-0.11	*	0.09		0.05	*
% Orthodox Protestant	0.17	#	0.02	#	0.09	
Urban	-0.04	*	0.07		0.02	***
Net migration (/100)	0.00		0.02		0.06	*
Mobility (/100)	0.05	**	0.01	#	0.02	
Population size (/10000)	0.06	***	0.01	*	0.01	***
Birth rate (/10)	-0.02	#	0.06	***	0.01	#
Family system variables						
Impartible inheritance	-0.10	*			0.05	
Age at entry courtship of girls (18-19=ref.)			0.06			
17 years or younger	0.00		0.05		0.05	
20 years or older	-0.07	#	0.09		0.04	
Unknown	0.08				0.07	
Age at entry courtship of boys (18-19=ref.)			0.09			
17 years or younger	0.10		0.05		0.07	
20 years or older	0.03		0.08		0.04	
Unknown	-0.03		0.04		0.06	
Peer group gatherings at home	0.06	#	0.04	#	0.03	
Existence of annual meeting events	-0.07	*	0.04	#	0.03	
Local meeting places	0.06	#	0.09		0.03	
Random part						
Community level intercept	0.18	***				
Deviance	-215784.5					

n individuals = 321,016; n communities = 153

Sources: Database Genlias_2007_3; Historical Database Dutch Municipalities;
significant at 0.10 level, * significant at 0.05 level, ** significant at 0.01 level, *** significant at 0.001 level.

as compared with the absolute nuclear province of Zeeland. Only in the egalitarian nuclear province of Limburg are the chances of contracting an husband-older marriages significantly lower. Only two family system attributes have a significant effect: the existence in the community of the custom of peer group gatherings (without parental control!) diminishes the chance of an husband-older marriage, while the existence of publicly-controlled annual meeting events augments chances of women marrying older men.

In particular, women from farming families seem to have had higher odds of marrying an older husband compared to those whose father's occupation was unknown, while women from the higher and middle classes and from (farm) laboring classes had smaller chances of doing so. Husband-older marriages occurred significantly more often in the nineteenth century than among those marrying in the first quarter of the twentieth century. In communities with high shares of Orthodox Protestants, a mobile population, and a large population size, husband-older marriages were less often formed. On the contrary, in places with high birth rates we find such marriages relatively more often.

In model 3, we analyze the determinants of wife-older marriages (marriages where the woman is more than two years older than the man). Wife-older marriage happened least often in Zeeland. Those from egalitarian nuclear Limburg and stem family Gelderland have significantly higher chances than individuals in Zeeland of entering such a union. None of the family system characteristics is significant. Also, young people from the higher and middle classes more often contracted wife-older marriages, while those from farmers' families did so less often. This indicates that this type of marriage might be related to the continuity of a family businesses (of the older wife) and / or to economic advantages of the wife's family. Migration is also associated with wife-older marriages. Our dummy for period reflects the declining trend of wife-older marriages, which was visible in Figure 3, falling to very low numbers in the twentieth century. Finally, wife-older marriages more often occurred in urban places, in Catholic communities, and in communities with high net migration, and less often in places with a large population size and high birth rate.

In this chapter, we investigated to what extent characteristics of family systems determined spousal age differences. We measured the degree of liberty versus authority in parent-child relations by courting practices, and the degree of equality versus inequality, which mark sibling relations, by inheritance systems. Our main results show that characteristics of family systems were indeed associated with spousal age differences. Marrying in a community with an impartible inheritance system was less often associated with marrying an age peer. The same held true for marriages in communities where girls began courting at a late age and where youngsters could (only) meet prospective spouses at annual meeting events, such as fairs and markets. These attributes signaled strong parental control. The existence of the custom of peer group gatherings and of local meeting places where youngsters could seek partners and spend considerable time together without parental supervision resulted more often in same-age marriages.

The idea behind this chapter was that spousal relations with a large age difference, specifically between an older husband and his younger wife, were more patriarchal and inhibited modern demographic behavior, for instance family limitation. In a study on structural and diffusion effects in the Dutch fertility decline, it was found that couples with age-homogamous social networks stopped childbearing earlier and had smaller families. The lack of such networks of age peers was one of the reasons that the unskilled laboring class and the farm laboring class lagged behind in the fertility transition (Bras, 2014). This paper complements this evidence by looking at assortive age mating in the spousal relationship, showing that the chance of marrying an age peer was partly determined by one's cultural context, i.e. by the characteristics of the family system in one´s community and region. It has been argued that equitable spousal relations were an important precondition for fertility decline, and as a matter of fact, also a consequence of this (McDonald, 2000). A recent study showed that childbearing trajectories characterized by early stopping were most common among Dutch couples with egalitarian spousal relations (Bras & Schumacher, forthcoming). Hence, we agree with Van de Putte et al. (2009), who argue that when studying the 19th century fertility decline and its socio-spatial variation, age homogamy must be taken into account to identify the reasons why some groups lagged behind in that decline. The results of this study point in the direction of an at least partly cultural

explanation of regional levels and lags in fertility transitions related to regional family systems. Future research might further advance this finding by examining how family systems, directly or indirectly, via (in)equality in spousal and other personal relations, influenced regional differences in the fertility transition.

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Comparing populations and societies: a reflection on the series 'Life at the extremes: the demography of Europe and China'

INTRODUCTION

During his lectures, Theo Engelen always emphasized that historians normally focus on big visible transformations but forget about the people, whereas "history without people is like a stage without actors. They are acting individuals who shape reality, and who also shaped the past" (Engelen, 2009, p. 7).[1] Historical demography deals with these people by examining their most important events and transitions in life – specifically those relating to fertility, mortality, nuptiality, family and household structures, and migration. To be able to study the lives of these people, he always emphasized the importance of taking into account the three C's: choices, constraints and coincidence. From this framework it can be argued that although it is true that people have agency and actively make choices during their lives, it would be a mistake to exclude the societal and environmental constraints that impose economic and mental limits on the choices that were actually available to individuals living within a specific historical context. In other words, for everyone choices depended on their respective living conditions, and were mostly driven by the desire to survive and prosper.

The choices people made in certain contexts had, however, many additional side-effects that they themselves could not foresee. Because of the influences of coincidence and unknown constraints, it is very dangerous to make assumptions about the conscious behavior of men and women living in historical times based on the hindsight inherent in a modern perspective. Therefore, only by carefully analyzing the historical context in which people lived may a possible explanation for certain demographic outcomes be found, since social norms and individual decisions will tend

to interact with different economic systems in such a way as to guarantee survival. Human beings, in the end, faced similar challenges to survive and reproduce all over the world, but it is also clear that they found very different strategies for dealing with these challenges (Teibenbacher, 2016). Since populations living at different times and in different regions have made use of such a variety of strategies (often with no readily apparent reason for choosing one over another), investigating the specific context in which historical actors lived is important for understanding in what kind of situation people actually lived. By doing so, the social structure of individual lives can be understood in relation to their historical and societal context. It may suggest the motivation for the choices that were made, which in turn affected demographic outcomes. To be able to understand different and similar choices and constraints within and between populations, comparisons are needed to determine the influence of a specific context. It is for this reason that comparison and comparability lie at the heart of social sciences, and Dutch, American and Taiwanese historical demographers have worked together during the last decades to study the lives of people in Dutch and Taiwanese societies in late traditional times.

This collaboration took shape in the joint project *Population and society in Taiwan and the Netherlands* and resulted in four volumes of the series *Life at the extremes: the demography of Europe and China*.[2] The main aim was to compare the populations of the Netherlands and Taiwan by investigating their life courses from birth to death in the nineteenth and early twentieth centuries (Chuang, Engelen, & Wolf, 2006a; Engelen & Hsieh, 2007; Engelen, Shepherd & Yang, 2011; Engelen & Wolf, 2005a). My contribution will focus on this project and offer a reflection on how and why life courses in these societies were compared. Moreover, I will reflect on what are, in my opinion, the most important findings resulting from this project, and discuss what kind of research can and should still be done in the future when comparing the Netherlands and Taiwan. As a starting point, the proposal which led to the whole project will be discussed first, followed by a description of the international scholarship that engaged with similar topics after the first ideas of the project were put to paper. To offer a structured reflection, the goals, setup and a selection of the results of the four published volumes from the project will be discussed next. Finally, based on the developments since the last volume was published in 2011, I will suggest three directions[3] for future research, in which I will incorporate the major strengths from the project and the advice given by Engelen in recent publications.

THE CREATION OF THE PROJECT 'POPULATION AND SOCIETY IN TAIWAN AND THE NETHERLANDS'

The main focus of Engelen during his early career was on historical demography in general and on fertility decline in particular (Engelen, 1987; Engelen & Hillebrand, 1990; Klep, this volume). At that time, the demographic transition theory was central in research on fertility decline. Modernization, especially economic modernization, was considered to be the most important cause of this decline. The Princeton European Fertility Project is an example of this. Other researchers, however, made it clear that economic modernization and conditions could not explain all the regional differences that were found (Alter, 1992; Coale & Watkins, 1986; Szreter, 1993). Also, Engelen & Hillebrand (1990) reasoned that economic motivation alone was not enough for people to limit the number of children they had: it was conditioned by the extent to which the limitation of the number of births was morally acceptable. According to them, both motivation and acceptance were therefore necessary to cause declining fertility. If this was true, Engelen & Hillebrand (1990) argued further, scholars need to investigate differences in mentality that promote fertility limitation, as well as economic incentives. Yet they acknowledged that the investigation of something like mentality is difficult, since it requires the study of phenomena such as regional traditions, cultures and habits.[4] Their solution, however, was to use a comparative approach: by taking into account the socio-economic differences and similarities between regions, it should be possible to distinguish the differences that are due to culture and custom. For example, if two regions had a similar socio-economic context and differed in demographic outcomes, it would probably be due to regional cultures, traditions or habits.

The comparative approach of Engelen acquired a true international dimension when he met Arthur P. Wolf and Hill Gates in Amsterdam in 1995 (Gates & Shepherd, this volume). Only a few months later, the first ideas arising from this encounter were put to paper during a meeting (on Asian population history) of the International Union for the Scientific Study of Population in Taipei in January 1996 (Engelen & Wolf, 2005b, p. 12). The project proposal, with the title *Population and society in Taiwan and the Netherlands*, started by explaining that Thomas Malthus (1798) organized his argument around a contrast between two kinds of demographic regimes: positive checks in Europe and preventive checks in the rest of the world.[5] What exactly is meant by Europe is linked to John

Hajnal's work (1965) which demonstrated that Western Europe in particular had a different demographic regime because of the so-called European Marriage Pattern. The distinctive features of this pattern were a high age of marriage and a relatively high proportion of people who never married. In addition, the starting point in the proposal was Hajnal's argument that, although a wide variation of marriage patterns existed, these patterns should all be separated by a distinct gap from marriage patterns in (Western) Europe (Engelen & Wolf, 1996, p. 1).[6] Hajnal's propositions had already inspired numerous efforts to account for the Industrial Revolution and other examples of English exceptionalism in terms of its unique demographic regime, which made it a lively and much debated topic. However, the question which was addressed in the proposal was whether the (Western) European demographic pattern was actually unique in the world, causing Europe to be richer and life there to be less precarious. Moreover, the main question was to find out if this was indeed caused by its unique marriage pattern, as Hajnal suggested.

It is interesting to see that the reason for situating this research in specifically the Dutch and Taiwanese populations is held back in the proposal until after the overview of the current theoretical knowledge framework about historical populations, but serves as the opening argument in the abstract: "The two most detailed and most complete sets of household registers in the world are found at the opposite ends of the Eurasian continent – in Taiwan and in the Netherlands. The project will take advantage of this happy coincidence to investigate differences and similarities in the demographic regimes of Europe and China" (Engelen & Wolf, 1996, p. 2). In my view, it demonstrates the importance of having access to high-quality data that includes dynamic individual and household information in order to actually be able to empirically test the grand questions of the kind posed by Malthus and Hajnal. A more detailed explanation for choosing the Netherlands is not given, which suggests that the Netherlands and Taiwan are just case studies for testing their hypothesis about demographic differences between Europe and China. In addition, ambitions were high, as it was believed that comparing societies in these two countries could have implications for demographic history in general: "A detailed comparison of the lives represented in these registers would have implications extending far beyond the national boundaries of Taiwan and the Netherlands. It would provide an opportunity to evaluate and, if need be, revise the models that now dominate our perception of the demographic history of the world" (Engelen & Wolf, 1996, p. 2).

To be able to revise and evaluate the models of demographic history, Engelen & Wolf (1996) formulated three main goals in the project proposal. The first was to compare a small number of selected communities in terms of the standard demographic rates in order to see if the suggested differences predicted by the Malthusian models were present. Because of the focus on the Malthusian models, the main demographic rates to be studied would be mortality, fertility and marriage, as these could give indications as to whether positive and/or preventive checks were playing a role. The second goal was to determine whether comparisons between China and Europe yielded different results in demographic outcomes when accounting for regional, social class and occupational variation. This is important because most studies at the time failed to go beyond national averages, while "it could be that people living in similar settings (…) behave in similar ways regardless of whether they are Taiwanese or Dutch"; or, in other words, it was argued that the correct approach was to "begin with real human beings and then determine whether or not their being Taiwanese or Dutch matters" (Engelen & Wolf, 1996, p. 3). The third and final goal was to test existing hypotheses that attempted to explain the most important differences between Chinese and European demographic regimes. An important observation in this regard was that Malthus also wondered why there was such an early and universal marriage pattern in China, and therefore the underlying factors causing these marriage patterns could also be of interest.

In the proposal, Engelen and Wolf (1996, p. 4) already suggest an underlying determinant when they argue that parental authority could be a better explanation since Hajnal, following Malthus, was mistaken when he put marriage at the center of the demographic stage: "The centerpiece of the global contrast Hajnal formulated is the extent to which parents have the ability qua parents to control the lives of their adult children. Marriage only helps to define the difference between Hajnal's European and non-European patterns. It is only one part – albeit an important part – of the two complexes. The variable that creates the two complexes is parental authority".[7] This alternative argument starts with the assumption that people want to control their offspring as long and completely as possible because they want to control their children's labor and the resources produced by this labor. The hypothesis was therefore that in Europe parental authority was largely limited to the control of unmarried and usually preadult children, since it depended on the control of property. In contrast, in China parental authority sprang from the simple fact of parenthood and

was backed up by the husband's corporate lineage and the state, which meant that Chinese parents controlled their children throughout their lives.

To test the formulated hypothesis, Engelen and Wolf's main aim for the project was to assess the extent to which Taiwanese and Dutch parents were able to control their adult children. They suggested that the project would do this by looking at how life courses were determined by the composition of the sibling sets in which they were born and reared. The assumption was that strong patriarchy gives parents the ability to treat their children as economic resources, and that they will exercise that authority in their own best interests. Under these conditions, the composition of a person's sibling set will predict his or her life course. Where weak patriarchy denies parents the ability to treat their children as deployable resources, the composition of a person's sibling set will exert only a weak influence on his or her life, and only to the extent that it shapes his or her personality. Under these conditions, a person's fate will be largely in the hands of such extra-familial forces as the marriage market and the labor market.

The setup of the project also reflected these three goals, since it consisted of two two-year phases: one rural and one urban. Specific areas within the Netherlands (Overijssel and Gelderland) and Taiwan (Haishan) would be studied and compared. Since most study areas on which data was already available were agricultural, the goal of the project was also to expand the initial research area to include urban populations as well. This was considered "absolutely necessary" because "one cannot assume that the rural portion of a pre-modern population represents the population as a whole" (Engelen & Wolf, 1996, p. 7). Moreover, it could be that the contrast between China and Europe only applied to more agricultural and traditional communities. By undertaking this kind of comparative analysis, it became possible, according to the authors, to look at (1) how marriage in the Netherlands and Taiwan was affected by property and family composition, and (2) whether mortality and fertility levels and outcomes confirmed Malthusian models.

Looking at this proposal with hindsight, it is clear that it reflected Engelen's previous research interests and observations within (historical) demography about the demographic transition and the way in which specific historical contexts influenced all major life course transitions between birth and death. It offered the possibility of comparing the most extreme of contrasting contexts with each other and of testing the grand theoretical

narratives as formulated by Malthus and Hajnal. Moreover, one of the most important observations that shaped their argument during the whole project is mentioned even at this early stage: variation in parental authority is what defined differences in marriage patterns and caused demographic outcomes to differ between Europe and China. Despite its groundbreaking claims, the proposal was not funded the first time it was submitted to the Chiang Ching-kuo Foundation for International Scholarly Exchange.[8] Yet personal communication from Wolf to Engelen demonstrated that Wolf was determined to submit the proposal again, as he was convinced that the project would be financed in the end. A year later, Wolf's confidence proved to be justified and the proposal made it possible to intensify the cooperation and initiate the research that addressed the questions that had been formulated. However, before turning to the four volumes that resulted from the project, the next section will first position the project within the international scholarship of comparative European-Asian historical research at the turn of the 21st century so as to be able to understand the project better.

UNDERSTANDING THE PROJECT 'POPULATION AND SOCIETY IN TAIWAN AND THE NETHERLANDS' IN THE CONTEXT OF INTERNATIONAL SCHOLARSHIP

It is important to understand what happened during the period after the beginning of the project and before the publication of the first volume (1997-2004) because international scholarship regarding Eurasian comparisons was developing rapidly. Until the 1980s, virtually no study of Chinese historical demographics existed, but from that time onward several important works were published at the end of the 20th and the beginning of the 21st centuries, when new Eurasian economic and demographic historical comparisons were made that challenged the way in which large-scale processes, such as modernization, industrialization and institutional development, were perceived (Pomeranz, 2000; Wong, 1997). These studies demonstrated that there were significant differences and similarities between Western Europe and East Asia economically and demographically, but at the same time many of the new debates involved empirical, methodological, and conceptual disagreements between scholars (Little, 2008).

One debate that is relevant for understanding the project *Population and society in Taiwan and the Netherlands* is the strong disagreement over

population dynamics triggered by these new studies, in which the perceived Malthusian view consisting of the stereotype of regulated population growth in Western Europe and ceaseless population pressure in China was challenged (Lavely & Wong, 1998). Firstly, scholars found out that Chinese fertility levels were actually not high, but quite low. Infanticide was most often mentioned as the main cause, and because both upper and lower classes used infanticide to limit their family size it was also not seen as a response to the kind of suffering described by Malthus. Secondly, family background and social class seemed to determine the size of the family as upper-class couples had more children: "In contrast with Europe, where the rich got richer and the poor got children, in China the rich chose to get children and consequently may not have become richer" (Lavely, Lee & Wang, 1990, p. 818). In other words, Malthus' positive check could not be considered only as a passive check in which nature in the form of famine and disease determines mortality outcomes. Instead, it should be considered as an active check in which a rational response to changing circumstances was of central importance in Chinese society. Yet, if this is the case, the Malthusian characterization of Chinese society needed to be revised, according to these authors (Lee & Wang, 1999).

With the arrival of the book of Lee & Wang (1999), titled *One quarter of humanity: Malthusian mythology and Chinese realities*, a real attack was launched on the still prevalent views originating from Malthus on the Chinese demographic regime. Lee & Wang (1999, p. 13) were very clear about the goal of their work in their opening chapter: "Two centuries after the publication of Malthus' famous essay, it therefore seems especially appropriate to review the Malthusian paradigm and to see to what extent he and his intellectual successors have been correct with regard to the Chinese reality". Throughout their whole work, Lee and Wang argued that while Malthus was right about pointing out differences in operations in the demographic systems of China and Europe, he was wrong in his understanding of these operations.[9] They concluded that in the Chinese demographic system population growth was checked by a complex interaction between population, economy and society in which parents made deliberate decisions regarding their families. Nevertheless, according to them, European and Chinese demographic systems were different because of the social context of demographic behavior. The distinctive demographic behavior of the Chinese – high female infant and child mortality, universal female marriage, low marital fertility and high female and male adoption – were seen as the products of collective interests and institutions. In

contrast, for the Western population behavior, distinctive features – the relatively low prevalence and late age of marriage – were seen as products of individual interests and strategies. According to Lee & Wang (1999, p. 139), therefore, "to the extent that there exists a binary contrast between China and the West, it is not so much in these population behaviors per se, but in the different social and political orientations of each society". Thus, the difference in cultural collective versus individual orientation seems, according to the authors, to be the determining factors behind the variation in historical demographic processes and outcomes in the East and the West.

Discussing the work of Lee and others is important, as these kinds of argumentation and observations were viewed as groundbreaking and were published only a few years after the collaboration in the project *Population and society in Taiwan and the Netherlands* began. Moreover, the book was received either very enthusiastically or very critically by members of the academic community (see for reviews Harrell, 2003; Hayes, 2002; Huang, 2002; Liu, 2001; Shepherd, 2001; Wolf, 2001; Zurndorfer, 2003).[10] Most researchers participating in the project *Population and society in Taiwan and the Netherlands* belonged to the latter group. Wolf (2001) in particular was very critical of the claims made about the agency attributed to the Chinese population regarding their fertility behavior. He argued that the observed fertility behavior was definitely not the result of conscious birth control, but of poverty and therefore malnutrition (Wolf, 2001).[11] Moreover, according to Wolf the studied population lived in special circumstances and therefore both the Qing nobility and the Eight Banners Company could not reflect the general condition of the majority of people living in rural villages. It is striking that the way in which he argued his case can be considered somewhat hostile; for example, the opening of his response started with: "The red flag of revolt has been raised (…)" which was followed by "against the authority of (…) and almost everyone else who has ever studied the Chinese family" (Wolf, 2001, p. 133). The summary of influential names indicates that Wolf tried to argue how ridiculous their arguments were. In the remaining part of the paper, he summed up thirteen claims which he refuted and debunked one by one, to eventually conclude that their arguments failed.

In a later article, Campbell, Wang & Lee (2002, p. 735) defended and underscored the claims made earlier in their work and directly attacked Wolf with the same kind of hostile language: "since Wolf's arguments are old, we had hesitated to respond", and resuming somewhat later with

"Wolf relies on an outdated understanding of the association between nutritional status and fertility" (Campbell, Wang & Lee, 2002, p. 737) In addition, they argued that his argument was based on wrong interpretations and his inability to understand the innovative methods they had used: "We clarify his [i.e. Wolf's] misinterpretations of our data, findings, and interpretations" (Campbell, Wang & Lee, 2002, p. 737). In the article, the main argument against an active Malthusian positive check in China was repeated again: rich couples also committed infanticide, which implied that female infanticide was not used as a kind of last resort by the poor or when times were bad. Therefore, a deliberate decision was made according to the social and economic characteristics and expectations of the household. According to them, scholars should therefore recognize this role of human agency in the Chinese demographic system, because it could help resolve the remaining puzzles in Chinese population history.

To resolve the debate, Lee, Campbell & Wang (2002, p. 601) proposed a new historical model, in which "varied and complicated demographic decisions and behaviors, and political, economic and social conditions intertwine and influence each other in a relationship which can be tested and measured." Campbell & Lee (2004) followed their own advice, as a new historical model was developed and used in the *Eurasian population and family history project*. This project was formed by an international collaboration of historians, demographers and other social scientists, and it too had the aim of investigating demographic patterns in both pre-modern Europe and Asia. The framework of this project builds on detailed individual longitudinal data from several rural communities in Sweden, Belgium, Italy, Japan and China, which were analyzed using the same kind of event history analysis. Surprisingly, neither data nor scholars from the Netherlands or Taiwan were involved. In the first volume of the project, the authors concluded that human agency was of great importance, and that individual responses to 'crisis' situations were quite similar in all the areas studied (Bengtsson et al., 2004). Most of the earlier findings were confirmed for China, but some could not be, due to a lack of data (Campbell & Lee, 2004). Later volumes of the *Eurasian population and family history project* on fertility (Tsuya et al., 2010) and marriage (Lundh & Kurosu, 2014) also underscored their claims about the basis of demographic behavior in Asia and Europe being too complex for binary oppositions such as those of Malthus to make sense (see for a review Riswick, 2015).

In summary, although Engelen & Wolf (1996, p. 8) were certainly right in writing at the time that "at present there does not exist comparative data

of the kind we will extract from the Taiwanese and Dutch registers", the timing of their research project was fortunate, as long-held assumptions about demographic behavior and trends were suddenly in the forefront of academic discussions. Yet these debates also influenced the original setup because of the heated debates between Wolf and Lee (see also Wolf & Engelen, 2008). The two groups used different literature to emphasize their theoretical claims for low fertility, employed different data and methods to measure fertility, and were even attacking one another on a more personal level. This also explains in part the renewed goals and setup of some contributions to all the volumes that were published as part of the project's series *Life at the extremes: the demography of Europe and China.*

THE GOALS, SETUP AND RESULTS OF THE SERIES *LIFE AT THE EXTREMES: THE DEMOGRAPHY OF EUROPE AND CHINA*

The first volume of the project was published by Engelen & Wolf (2005a) with the title *Marriage and family in Eurasia. Perspectives on the Hajnal hypothesis* (see for a review Matthys, 2007). The plan for this first book was to deal with general questions, and then to move on to more empirical studies in the next volume. The first chapter also explained what the main goals of the project were, and why the name *Life at the extremes* had been chosen for the series' volumes: "We plan to compare populations that lived at the opposite ends of Eurasia and consequently developed radically different social forms; to study the life course from birth to death and include people at both ends of the social ladder; and in terms of the behaviors that define demography, China and Europe represented two radically different adaptations" (Chuang, Engelen, & Wolf, 2005, p. 8-9). One of the main goals was still to assess whether Hajnal and Malthus were right in describing two different demographic regimes that were governed by different population checks. In short: "The hallmark of the work published in this series will be studies that begin with individuals in particular contexts and build from there to comparisons of the populations of two very different societies" (Chuang, Engelen & Wolf, 2005, p. 9). The aim was therefore not to focus exclusively on questions about differences between the Netherlands and Taiwan, but also to discover similarities.

Although this argumentation remained the same as in the proposal, in this volume more was explained regarding how and why the Netherlands and Taiwan could be compared. One of the main arguments is that, despite

being very different, "there were ways in which the two societies were more alike than is commonly realized. (…) This is important because they provide a common ground that allows us to identify the cause and consequences of the major differences. In the language of the laboratory, they are the experimental constants" (Chuang, Engelen & Wolf, 2005, p. 9-10). The common ground for the comparison was based on three observations in the nineteenth century for the Netherlands, and the period 1906-1945 for Taiwan. First, in both populations 'natural fertility' was the norm, in the sense that there was no birth control or desire for birth control. A second common feature was that both societies had mixed economies. The last, and most important, reason was that the years studied were transitional years in which Dutch and Taiwanese society transformed into a modern society (Chuang, Engelen & Wolf, 2005, p. 10). Yet Chuang, Engelen & Wolf (2005, p. 11) argued, "We do not claim that the Netherlands are representative of Europe or that Taiwan is representative of China". Instead, they claimed that similar differences could be found whenever another European area was compared with any other Chinese area because "the differences between the Chinese and European demographic regimes were so great that the differences within the two regions do not disqualify comparisons based on their parts" (Chuang, Engelen & Wolf, 2005, p. 11). This was an important distinction, as a previous criticism had been that results could not be generalized because of the peculiarities of particular regions.

One of the main findings of the first volume is the significance of different interpretations of the Hajnal thesis. In their introduction, Engelen & Wolf (2005b) propose a conceptual pyramid to aid in understanding three levels of interpretations that are a variation of the Hajnal thesis. From the bottom to the top: (1) a straightforward ethnographic claim arguing that regarding marriage, household structure, and life-cycle service, Europe is (almost) unique in the world; (2) Europe was unique because it required a man to have an independent livelihood before marrying; and (3) a demographic theory in which marriage is seen as the regulator between economic wellbeing and population growth. By distinguishing between these three levels, the pyramid demonstrates that much discussion is based on how scholars interpret the Hajnal thesis. Moreover, through the difference in interpretations, it became possible to investigate which of the three levels could be verified or falsified. A second finding of the first volume is something that was hypothesized as the main reason behind the difference in demographic regimes between Western Europe and Asia: parental

power. Following the first ideas in the proposal, the contributions of Wolf (2005) and Klep (2005) further elaborate on how parental authority should be perceived and explain why in Europe people married later and in smaller numbers than elsewhere. Since parents in Europe could only control their unmarried children, they often acted as an obstruction to marriage because they needed their children's assistance within the household. Moreover, most young people were not inclined to marry at an early age because of the financial consequences and their own personal preferences. In contrast, in Taiwan early and universal marriage existed because children and grandchildren were seen as capital resources. This meant that parents wanted as many children as possible, and that these were used as resources, especially after they were married.

As well as these two main contributions, the editors drew five conclusions from the contributions in the volume. The first was that there was a clear difference between European household systems and those found in most of the rest of the world when comparing marriage patterns. The second and third conclusions were that exceptions to the European household system and development over time of the European and Asian household system add complexity to the model that should be studied further. The fourth was that there is still no adequate explanation for why Europe was unique, although alternatives to marriage such as differences in parental power or female labor may offer some clues. Lastly, they concluded that "it is time for students of marriage and family systems to look carefully at their assumptions concerning what is and is not natural for our species" (Engelen & Wolf, 2005b, p. 34). It seems that, instead of drawing a sharp dichotomy between East and West, the contributions in this volume argue for a broad and complex spectrum of possibilities in which Western Europe and China are just extremes. Moreover, one could argue that their last conclusion comprehends the necessity of including and studying specific historical contexts to a greater extent: what is natural for human beings is to adapt to the local socio-economic circumstances that limit the choices people have.

The second volume was published by Chuang, Engelen & Wolf (2006) with the title *Positive or preventive? Reproduction in Taiwan and the Netherlands, 1850-1940* (see for a review Moreels, 2008*)*. The focus of this volume is on European and Chinese fertility, which is immediately positioned within the larger international literature of Eurasian comparisons in general and fertility in particular. The title of the introduction, 'Malthusian realities', makes the position of the editors in this debate clear from the

start, as it is an immediate challenge to the work of Lee & Wang (1999) that was titled 'Malthusian Mythology and Chinese Realities'. After the title, the first paragraph also challenges the new findings directly: "despite three centuries of interest and a great deal of speculation, quantitative comparisons are rare and the differences between European and Chinese fertility remain ill-defined and subject to inclusive controversy". This assertion is immediately followed by the first sentence of the second paragraph: "The papers included in this volume are the first fruits of an effort to repair this situation" (Engelen & Wolf 2006a, p. 8). The reason for choosing the Netherlands and Taiwan seems to be framed in more practical terms and is connected with the previous observation: "The strategy is to begin with two localities that have excellent data" (Engelen & Wolf, 2006a, p. 8). Further argumentation for why the Netherlands and Taiwan were studied in order to compare the ranges of Chinese and European demographic regimes is similar to that of the first volume. The description of in the contents of this volume indicates that all papers were engaging in the debate on how fertility in the Netherlands and Taiwan differed, and whether these differences were in line with previous studies that had argued that the differences between Europe and China had been greatly exaggerated. This is done by investigating the impact of illegitimacy, the geographical context, cultural influences, infant mortality and deliberate birth control strategies.

In one of the chapters, Engelen & Wolf (2006b) addressed a goal of the original proposal by comparing how fertility processes and outcomes were similar or different when comparing urban and rural areas in the Netherlands and Taiwan with one another. For the Netherlands, Nijmegen and Borne were taken; for Taiwan, Taipei City and three clusters of villages. By doing so, not only are the differences between European and Asian nuptiality and fertility compared, but it is also possible "to reinvigorate this hoary contrast by imposing on it another even older contrast" (Engelen & Wolf, 2006b, p. 108). A surprising finding was that the lowest fertility was found in urban Taiwan, and not in the urban or rural Netherlands. According to the authors, this suggested that Taiwanese cities did not conform to the Malthusian paradigm, as women in these cities who married started to marry at an early age, but twenty-five percent never married at all. The reason for this observation, however, was not that many Chinese women made the decision not to marry and instead took the opportunities of wage employment offered in the city. On the contrary, the probability of a woman ever marrying depended on her sib-

lings set: only when no older brothers were present did girls remain unmarried, because they had to work for their families in wage employment in any of the various urban industries. In any other case, parents made the decision regarding whether their daughters would marry, even when they wanted to remain unmarried. In general, this confirmed that for all regions the critical distinguishing feature between the four sites in fertility outcomes could largely be explained by differences in their marriage rates, which suggested that "in Taiwan, just as in Europe, fertility was conditioned by entry into marriage, not by control within marriage" (Engelen & Wolf, 2006a, p. 12). Moreover, it was argued that the real cause behind the different marriage rates was parental power. Yet the way that people's life courses and ideas about such matters as marriage and fertility were
460 shaped could only effectively be directed when they had institutional support. For Chinese parents, this was the force of the Chinese state, and for European parents this was partly true of clerical authority.

In the final chapter by Wolf & Engelen (2006, p. 40), the findings of all previous papers are combined in order to directly address the debate about Malthusian checks in China: "We accept their contention [i.e. that of Lee and others] that Chinese women bore fewer children per year of marriage than European women. What we do not accept is their contention that this was because Chinese couples practiced deliberate fertility control and that as a result Chinese fertility was generally lower than European fertility. We contend that there was little, if any, effective birth control in China, and that while marital fertility was lower than in Europe, general fertility was far higher". The style in which this chapter is written is reminiscent of the earlier debate between Wolf and Lee, as literature, data and results are presented in order to make the case against deliberate fertility control and proactive behavior in China. Moreover, the hostile undertone is still present, in the labeling of the work of Lee and others as mistaken, as seen in expressions such as "one of the scholarly failings" and "equally egregious is their failure to refer" (Wolf & Engelen, 2006, p. 241). In the end, Wolf and Engelen conclude that there are two reasons why Lee and Wang's challenge to the Malthusian view fails: (1) there is no evidence for widespread birth control in China because lower marital fertility can be caused by other factors that are more likely; and (2) general fertility was much higher in China compared to Europe. This means that China was in fact not a special case in which people consciously limited the number of children they had, but in fact was representative of the great majority of countries in which fertility control was absent.

In the last part of the introduction, Engelen & Wolf (2006a, p. 15) reflected at a more conceptual level on the challenge made by Lee and others, and came to the following conclusion: "The debate initiated by the revisionists has distorted our view of the questions involved by focusing interest on a comparison of Europe and China. We need to return to the global perspective taken by Malthus and Hajnal." They argued this because, looking from a global perspective, one cannot deny that there are important demographic differences between Europe and China. In addition, they argued that the revisionists neglected the more significant question of why this is so. By only concluding that differences are greatly exaggerated, they were not looking at what the main causes behind the differences were. The reason given for why Europe and China differed is somewhat altered from what was argued in the project proposal and the first volume: "We will conclude by suggesting that what made Europe unique was the fact that it was only there that clerical authority overruled parental authority" (Engelen & Wolf, 2006a, p.16). The underlying reasoning is again that, when parental preferences and advantages are taken into account, one can only conclude that marriage was universal and marital fertility high in most agricultural societies because it maximizes the number of children and hence of resources. Only in Europe were there no advantages for parents when children married, since they accumulated their own resources and moved out of the household.

The third volume was published by Engelen & Hsieh (2007) with the title *Two cities one life. Marriage and fertility in Lugang and Nijmegen* (see for a review Vandezande, 2010). Unlike the previous volumes, this one investigated marriage, illegitimacy, infant mortality and fertility for one specific town in the Netherlands and one in Taiwan. Although the general argumentation concerning the methodology and purpose of comparing the Netherlands and Taiwan was the same as in the previous volumes, this time the Malthusian framework is applied to test how Nijmegen and Lugang fitted into the debate on the anticipatory attitude (proactive behavior) of the Chinese population on its demographic growth: "The central questions throughout this book will be to what extent reproductive behavior in Nijmegen and Lugang was preventive, positive or proactive. Did the inhabitants of the two cities, in other words, accept fate, did they act so as intentionally to neutralize fate, or did they behave in a way through which they, unconsciously, interfered with fate? Or, to paraphrase one of the contributions to the ongoing discussion: was Chinese reality indeed inadequately described by the Malthusian mythology that seems to suit Europe

so well?" (Engelen & Hsieh, 2007, p. 52). It is important to note that Engelen and Hsieh acknowledged that there were no answers to these questions, because "although the debate on the surface uses scholarly argumentation, it is essentially a clash of beliefs" (Engelen & Hsieh, 2007, p. 51). This is a significant observation as it also has implications for some of the argumentation in the previous volumes of the project, and is therefore a first attempt to move beyond the arguments used in the debate about Malthusian checks.

In the final chapter, the authors summed up the most important results of the comparison between Lugang and Nijmegen and what these results mean for the debate about human agency in historical demographic processes. In other words, "basically we want to know whether fate, circumstances or choices dictated their lives" (p. 160), a remark which echoes the earlier work of Engelen. In the analysis on nuptiality, they concluded that traditional Malthusian characteristics applied: marriage was young and universal in Lugang and late and restricted for the population in Nijmegen. The exception was the Taiwanese male population, of whom also a proportion never married. The results on illegitimacy did not support the idea that because marriage was late in Nijmegen it would also occur more often, as the rates were generally the same. For infant mortality, the difference between Lugang and Nijmegen was not as structural or marked as the Malthusian model would predict. In both cities, biological factors were the main variables explaining infant mortality. In addition, in both populations male infants died more often than female infants, suggesting that there was no (female-specific) infanticide. All these results built up to the results for fertility, in which the authors concluded that neither in Nijmegen nor in Lugang was deliberate birth control present.

Although previous volumes directly engaged in the debate about whether low Chinese fertility levels were caused by proactive behavior or malnutrition, Engelen & Hsieh (2007, p. 166) took another perspective in the last two paragraphs of this volume in order to broaden the scope of the debate. They argued that the marriage practices themselves might provide a possible explanation: "The newly wed couples [in Lugang] must have felt awkward finding a stranger in their bed, or maybe even worse, someone with whom they grew up. In many cases the selection of a partner by the parents must have resulted in lifelong misery". In Lugang it was common for parents to arrange marriages for the children, often with strangers or between their sons and adopted daughters-in-law.[12] So, instead of arguing from a biological perspective or attributing agency to

people, Engelen and Hsieh argued from a more structural socio-cultural approach in order to be able to include the ways in which customs such as marriage are performed, as they may also determine demographic processes and outcomes such as fertility. The real conclusion of the book seems therefore to be that Malthus simply did not see the complexity of the mechanisms involved, and that his theory does not do justice to either Nijmegen or Lugang, as preventive and positive checks were active in both societies. The lesson to be learned from this book, according to the authors, was therefore that historical reality is very complex, much more so than simply denying or confirming what opponents called the 'Malthusian mythology'. All of this is reminiscent of previous conclusions drawn by Engelen about looking at regional traditions and cultures in order to truly understand why people have the number of children that they do.

The fourth volume was published by Engelen, Shepherd & Yang (2011) with the title *Death at the opposite ends of the Eurasian continent. Mortality trends in Taiwan and the Netherlands 1850-1945* (see for reviews Campbell, 2012; Johansson, 2012; Zhao, 2012). In this volume, the distinction between Western Europe as a low-pressure population system and Asia as a high-pressure system – as argued by Malthus – is the central theme. Although the comparisons between Dutch and Taiwanese communities constitute the main goal, this volume consistently devotes much more space to subnational differences than to national-level differences. This is demonstrated by the three clusters around which the volume is structured: (1) changes in national levels and patterns of mortality in each of the two societies; (2) examples of the steady improvement in public health, disease prevention, and socio-cultural care; and (3) the understanding of the link between mortality and fertility. Only in the last section were direct comparisons made that addressed the issue of Malthusian positive and preventive checks, while in the other sections areas within the Netherlands and Taiwan are studied.

One of the chapters that directly engaged with the Malthusian debate was written by Engelen & Wolf (2011) on the subject of maternal depletion[13] and infant mortality in Nijmegen and Lugang. The authors wrote that "if Malthus is right, depletion must be a phenomenon more active in Taiwan than in the Netherlands, since women in Taiwan married younger and therefore had a longer reproductive span. The impact of small birth intervals on infant mortality should therefore be more manifest in Taiwan too" (Engelen & Wolf, 2011, p. 267). Three possible explanations were pro-

posed by the authors for differential birth spacing in Nijmegen and Lugang: (1) proactive behavior to limit the number of children; (2) lower coital frequency in Taiwan; and (3) the influence of maternal depletion. The first two explanations were dismissed, and the authors demonstrated that short birth intervals cause higher infant mortality. Although they acknowledged that their argument would be more convincing if data from more places than Nijmegen and Lugang were used, they demonstrated that maternal depletion appeared to be a more active phenomenon in Taiwan because infants born after a short birth interval had a 27 percent higher change of dying in Lugang compared to Nijmegen. As an explanation, they pointed to the observation that Taiwanese mothers were relatively malnourished compared to Dutch mothers, and suffered more from maternal depletion. The idea was that longer birth intervals were not deliberate but were instead a result of the limits imposed by Taiwanese women's bodies and infant mortality under these conditions. In the end these findings were also translated to the larger debate by falsifying the theory that parents in China actively limited the number of their children: "Thomas Malthus would have nodded approvingly, had he been able to read this conclusion. For those who deride his ideas as mythology, the same conclusion should be reason to rethink their views" (Engelen & Wolf, 2011, p. 284).

The introduction ends with a summary of what can be learned from the contributions in this volume. First of all, there was an enormous regional difference in mortality patterns in the Netherlands and Taiwan, while regional differences were not found for nuptiality and fertility in Taiwan. Secondly, they argued that, although neither Taiwan nor the Netherlands was experiencing a kind of subsistence crisis, "we find hints of Malthusian pressures in the patterns of neonatal and infant mortality" (Engelen & Shepherd, 2011, p. 14). The main argumentation for this conclusion was based on the two chapters that discussed how birth intervals in Taiwan could only be shortened at the cost of a steep rise in infant mortality because of maternal depletion, and that in the Netherlands infant mortality was elevated mostly post-neonatally by early weaning. This pattern was worsened by industrialization and the pressure on mothers to work outside the home. Therefore they concluded that "we find pressures originating from the West European marriage pattern that link to positive checks as well as preventive ones", although "for our authors, Malthus' most valuable insights relate to differences in marriage and family systems, which leads to our studies of the connections between marital fertility and

infant mortality, rather than his predictions of subsistence crisis related to overpopulation" (Engelen & Shepherd, 2011, p. 14). So despite the focus on Malthus, the most interesting features of this volume are the data and new findings that are not directly related to the debate about positive and preventive checks.

THE FUTURE OF COMPARING THE POPULATIONS AND SOCIETIES OF THE NETHERLANDS AND TAIWAN

What can we conclude when reflecting on the results of more than fifteen years of collaboration? First of all, it is safe to say that the initial project developed into a much larger one than was envisioned in the first proposal. While the initial project proposal set out to investigate selected areas in Taiwan and the Netherlands, it covered many more areas and related themes in the end. Still, it is clear that the main ideas that were already present in the proposal were developed further. The main example of this is the argument that the main factor of difference between the East and the West was not marriage itself, but the set of underlying causes affecting marriage such as parental authority. Secondly, the developments in the international literature influenced the project in such a way that some contributions focused especially on testing and arguing against the case made by Lee and others, particularly with regard to fertility. The end result of these contrasting views was that the two groups did not come to an agreement and the debate was never settled (Campbell 2012b; Campbell & Kurosu 2018). Thirdly, the project has shown that there are many puzzles that remain to be solved. For example, in what ways exactly does parental power influence demographic processes and outcomes? And are there other factors that also influenced the differences in marriage patterns between East and West? For future research to be successful in answering these questions, I will suggest three directions that incorporate the strengths of the project *Population and society in Taiwan and the Netherlands* and the advice given by Engelen in his recent publications.

The first direction for future research is the use of both quantitative and qualitative methods to study historical demographic processes and outcomes. The strength of historical demography, in my view, is that it combines the assets from the disciplines of history and demography to use (causal) structures to determine constraints on human behavior, while also recognizing the influence of human agency in the choices of historical

actors. From this perspective, statistical analysis can be used to test theories that simplify reality because it makes it possible to quantify single events and to make them comparable. By doing so, it may explain events and show how representative they are. In contrast, by combining this with qualitative research, the complexity of single cases, the diversity of interpretations, and the motivations of people themselves can be studied. During the last decades, however, a connection between the two has not always been made, as the emphasis has been on quantitative methods. An example is the above-mentioned *Eurasia population and family history project*, which mainly focuses on complex quantitative methods, while the series *Life at the extremes* also included qualitative research that complemented quantitative findings. For example, the examination of the hypothesis by Engelen & Hsieh (2007) that marriage practices themselves can cause different fertility rates is only possible by incorporating qualitative methods.

This argument is not new, as the combining of methods for historical demographic processes and outcomes had already been encouraged by Engelen & Hillebrand (1980). In recent years, however, the division between those who use hardcore statistics and those who use qualitative methods has been growing, which makes this an important argument to repeat. Engelen (2010, p. 58) argued, for example, that advanced statistical methods "form an excellent starting point, but true knowledge only comes when we know why actors acted the way they did and how this influenced their personal lives (…) the combination of both is necessary to reach our goal." Connected to this is the fact that the focus on more and more specialized publications that makes use of complex statistics is too strong and is also disconnecting quantitative historical demographers from the field of history in general. Engelen & Van der Woude (2016, p. 488) therefore argued that "the translation of the most valuable research into accessible publications is a necessary step to keep the specialization as lively as it is now. If not, we deny other historians and the general public an insight into the most intimate aspects of human lives in the past". In short, historical demographers should translate their findings back into what such things actually meant for the reality of the people behind the numbers, as all figures and statistics are based on their life experience. This is also true for historical demographic research on the Netherlands and Taiwan.

The second direction for future research is to work together with scholars with competing views and try to incorporate as many disciplines as possible. The debate between Wolf and Lee about data, methods, find-

ings and – most importantly – interpretations does not increase our understanding of certain processes, such as fertility, and the debates will not be settled. As already mentioned, arguing – or even claiming – correctness does not advance the debate any further, and is basically just a demonstration of a clash of beliefs. In future research it is therefore important to have an open dialog about how and why we come to certain interpretations and to acknowledge the limitations of the sources and of our own perspective, as they are both subjective (Riswick, 2012). At the same time, the project *Population and society in Taiwan and the Netherlands* and the *Eurasia population and family history project* demonstrated that when large teams of experts from different backgrounds work well together our understanding does increase, mostly by moving beyond simplistic oppositions and acknowledging the complexity of how historical demographic processes took shape in the past. Campbell (2016, p. 194) for example made the following observation when looking back on the *Eurasian population and family history project*: "One of the most important principles was that we emphasized consensus on our process for setting our intellectual agenda and for choosing our method and models". Great integration of the approaches used by historical demographers with, for example, those of geographers, geologists and environmental scientists can lead to a broader understanding of the environment, and in particular of how aspects of the environment affect demographic outcomes. Moreover, this is true for all other subjects as well (Smith, Hanson, & Mineau, 2016).

The last direction for future research is to not only look deeper into East-West comparisons, but also to look at differences within the East and West in order to understand how specific historical contexts moderate demographic relations, processes and outcomes. In other words, although I agree that the big question of what causes demographic processes and outcomes to be fundamentally different in Taiwan and the Netherlands should not be lost from sight, it is also important to pay more attention to the differences within areas. In other words, we should move beyond the discussion of Malthus and Hajnal when studying the Netherlands and Taiwan. This is especially important as similar outcomes can be the result of different processes and vice versa. Moreover, it is now actually also possible to look at similar areas elsewhere, as in recent decades scholars have compiled and made available a large number of household and individual level datasets describing historical populations in North America, Europe and Asia (Dong et al., 2015; Ruggles, 2012; 2014). These advances in historical population data construction have contributed enormously to the

development of comparative historical demography in particular, and comparative social science in general. Through this development, it has become possible to study long-term trends and to truly understand the lives of people who had to define and shape their life courses by making decisions within the ecological, sociocultural and economic constraints imposed by their communities. The time is therefore now right for research in Europe and Asia to emphasize comparisons within the continent, and move away from the monographic studies of single countries or regions and broad comparisons between Asia and the West that have dominated work so far. By not only investigating the differences between, but also those within, the Netherlands and Taiwan, we can truly understand how and why demographic regimes in the East and West differed and overlapped.[14]

As a result of this, previously unanswered questions raised by the project *Population and society in Taiwan and the Netherlands* can be approached again with new sources, methods, and theoretical frameworks. For example, future studies can take a closer look at fertility behavior in both regions by studying not only fertility levels, but also the practices surrounding courting, sexual intercourse and birth to try to resolve the debate about fertility control. It would also be possible to further investigate two other themes, namely the possible influence of differential parental power or female labor, which have previously been discussed as driving forces behind the differences in demographic outcomes. Another perspective may appear by combining pamphlets from governmental campaigns, newspapers, surveys, lawsuits, official reports, ethnographies or even literary works and movies to obtain a better understanding of the experiences and motivations of the people behind the demographic trends.[15] New theoretical frameworks originating from evolutionary demography can, for example, also offer new ways of viewing demographic behavior as a way to maximize survival and the number of (surviving) offspring. The latter could be especially interesting, as the configuration of kin around the individual has emerged as a factor of considerable importance for demographic outcomes (Campell & Kurosu, 2018). In short, there are many research themes that can be studied further in order to achieve a better understanding of how we arrived at where we are now (see also Matthijs, Hin, Kok, & Matsuo, 2016). More importantly, however, we would be able to provide a historical basis for discussing the future of Western and Asian populations in the years to come, as we will understand better how specific historical contexts moderate historical demographic

behavior, processes and outcomes in the daily lives of the historical actors that we study.

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1. In Dutch: "Geschiedenis zonder mensen is als een decor zonder acteurs. Het zijn handelende individuen die de werkelijkheid vormgeven, en dat ook deden in het verleden." The lectures took place during the years 2008-2013 when I studied History at Radboud University in Nijmegen. My initial interest in history originated – as did that of most students – from a fascination with the great events and leaders of the past. However, this focus shifted as early as my first year because of this observation of Theo Engelen in a lecture on Historical Demography.
2. The project started in 1997 and was coordinated by Theo Engelen (Radboud University), Arthur P. Wolf (Stanford University) and Ying-Chang Chuang (Academia Sinica). The research program was called *Population and society in Taiwan and the Netherlands* and the volumes resulting from the project are known as volumes from the series *Life at the extremes: the demography of Europe and China*.
3. Of course there are many more possible future directions, but I limit myself to three. The specific number of three possible future directions is also taken because in his lectures Theo Engelen often uses concepts that come in threes. An example is the three C's (as mentioned in the text).
4. Another solution to measure regional cultures was to look at the voting behavior. See Engelen (1987).
5. Malthus argued that the existence of the unequal growth of population (exponential) and food (linear) pointed toward the existence of some 'laws of nature', which he called 'checks, that kept population growth and food production in balance. The first of these checks he called positive, which increased the death rate, mainly because of diseases, dis-

asters, wars, and famines resulting from a lack of proper or sufficient nourishment. The second law Malthus identified consisted of preventive checks that affected the birthrate by which people could consciously avoid a population crisis. In Western Europe most people married at a relatively late age and a large percentage of the population remained unmarried and childbearing was only 'allowed' within marriage. In turn, the passion between the sexes became 'morally' restrained and created a situation of low fertility which limited population growth.

6. Tony Wrigley also had an huge influence on the idea that marriage was the starting point for modern historical demography. This is evident in all of Wrigley's work but especially in Wrigley & Schofield (1981).
7. It is unclear to what extend this was really an argument of Theo Engelen himself as the proposal was probably written and commented on by other scholars too. For instance, Arthur P. Wolf and Paul Klep were very interested in the ways in which parental power played a role in key demographic processes.
8. Later also funding became available from the N.W. Posthumus Institute, the National Science Council in Taiwan and the Dutch Organization for Scientific Research. This was in addition to the support and funding that was provided by Academia Sinica, Radboud University and Stanford University.
9. To prove Malthus' misunderstanding, they point out four distinctive aspects from their earlier studies which contradict Malthusian theories. The first concerns the positive check itself. According to Lee and Wang, famines had limited effect, whereas individual proactive interventions, especially female infanticide, were far more effective in controlling population growth. Moreover, female infanticide not only directly caused a control on population growth, it also caused a second feature of the Chinese demographic system: a gender-unbalanced marriage market. This caused marriage to be universal for women, but as a consequence a large percentage of men could not marry. The latter was not taken into account by Malthus. A third revolutionary finding indicated that Chinese fertility was not much higher than European fertility. Furthermore, marital fertility was actually lower. Lee and Wang point towards the late starting, long spacing and early stopping fertility behavior of the Chinese to argue that this indicates collective decision making in which fertility was deliberate controlled. The fourth and final characteristic was the importance of fictive kinship, especially the adoption of children
10. The main enthusiasm was based on the novelty of their approach and the new data they used to challenge long-held assumptions. Criticism was formulated on the selective use of data, the lack of alternative hypotheses and the problem of looking from a local or national perspective at the study of populations.
11. This was actually not the first time that Chinese fertility behavior was debated. Several years earlier Coale (1984) and Wolf (1984) had already had a disagreement on this subject, in which Wolf attributed the relatively low fertility levels to general poor living conditions and malnutrition.
12. A variation of a 'normal' marriage was made in situations in which it was hard to find a bride. In a minor marriage a sim-pua, or little daughter-in-law, would be adopted into the family at a very young age. The main difference between a major and minor marriage was the timing and the ceremonial complexity. Although major marriages were the norm in most Chinese societies, in many communities in Northern Taiwan almost half of marriages were minor marriages. Moreover, the practice of minor marriage meant that sons and adopted daughters were therefore raised together but had to marry each other in their teenage years. See for more information Riswick (2013) or Wolf & Huang (1980).
13. Maternal depletion refers to the possibility of ongoing decline in physical health during the reproductive life of a woman. It is the result of the growing metabolic burden of successive gestation and periods of lactation on societies where birth intervals are short.

14. This belief is the starting point of my own PhD project *Between Rivalry and Support: Differences in Mortality Chances of Brothers and Sisters in the Netherlands and Taiwan, 1863-1945*, in which differences within the Netherlands and Taiwan are also studied. The *Eurasian population and family history project II* also has this goal, looking specifically at the differences within Asia (see Dong, 2016). More recently, Campbell & Kurosu (2018) have also argued that it should be easier to link demographic behavior to particular features of economic, social or cultural contexts.
15. An example for how infanticide in China can be studied from qualitative sources is King (2014). See for a review of this work: Riswick (2014).

[9]

YULIYA HILEVYCH

Generations and contexts in the study of continuity and change. The example of fertility declines

INTRODUCTION

Ever since the attempts to theorize our thinking about society and its course of development began, the study of continuity and change has been one of the key issues that triggers our curiosity on this subject. As our thinking about society advances, our theories and methodologies develop too. It is perhaps an oversimplification to say that sociological perspectives help to trace how different snapshots of social realities are connected and form a phenomenon at a given time and place, while historical perspectives help to trace this phenomenon retrospectively and connect it to other events across time and place. Either way, each discipline has laid a foundation toolkit to study continuity and change, so as to uncover how we have come to be where we are today. This theoretical and methodological toolkit has been largely adopted and further developed by social science historians and especially historical demographers, where a crucial role has been played by Theo Engelen. Here I continue the debate on continuity and change in demographic behavior that has been prominent throughout the work of Engelen (1987; 1997; 2002; 2003; 2006; 2014; Engelen & Wolf, 2005). By taking this debate further, my aim is to illustrate how some major concepts in history and sociology, namely generations and contexts, may help us to advance our understanding of the continuity and change surrounding the phenomenon of fertility decline

Perhaps one of the most important lessons that studies of fertility declines have taught us is that the demographic transition phenomenon occurs differently between and within societies (see for example: Engelen 1987; 1997; 2006; Greenhalgh, 1995; Szreter 1996). More importantly, it would be mistaken to assume that every society would ultimately witness

this demographic change (Greenhalgh, 1995; Sigle, 2015). When conducting a historical ethnography of fertility declines in Soviet Ukraine, I was faced with the puzzle of why, as compared to Ukraine, in other parts of the world that underwent fertility decline various (configurations of) factors seemed to play a role in this demographic behavior change. For example, oral histories of the post-war fertility declines in Europe, such as in the Netherlands (Hülsken, 2010; Schoonheim, 2005) and Switzerland (Rusterholz, 2017), highlight that in different localities, the diverging role of religion was important for how individuals adopted certain birth control practices and for their views on family size. Scholars working on Britain have found that there social class was associated with the onset of regional fertility declines and subsequent diverging utilization of birth control methods (Fisher, 2006; Szreter, 1996; Szreter & Fisher, 2010). In contrast, I observed that in Ukraine the role of the extended family, specifically the change in practices of family relations as individuals moved to urban areas, seemed to be crucial for how individuals practiced birth control and made their decisions concerning family size (Hilevych, 2016b).

From the very start, this rough comparison suggests that demographic phenomena are as complex as other social phenomena simply because the former are also part of our social realities. And while each of these factors – whether it is religion, social class, proximity to kin or something else – may seemingly matter more for the changing fertility trends in one locality than another, what seems to be vital is not any of these factors alone. Instead, and as the work of Engelen has also shown (Baud & Engelen, 1997; Engelen, 2002; 2014), constraints and opportunities that are specific to a certain locality connect and situate these factors and, hence, individual lives in relation to one another, in such a way that they later navigate their reproductive decisions in a meaningful way as they see it. Certainly, the lens of continuity and change is just one means of studying fertility declines. Nevertheless, it is a meaningful one when it comes to situating and explaining this phenomenon on a local level. The two concepts examined here, generations and contexts, could be seen as drivers of both continuity and change. However, for the purpose of this essay, I discuss the role of contexts through the lens of communication and how this could help us to grasp the change. In what follows, I discuss the role of generations through the lens of memory and how this can help us to understand how continuities are being maintained. I end with some concluding remarks on how generation and context can be a productive means to shed some light on the locally specific context of constraints and opportunities that may matter for individual reproductive decisions.

To examine different characteristics that may potentially affect fertility behavior, such as class, religion, language and education, is to identify the context that matters for reproductive practices at a specific time and place (Baud & Engelen, 1997; Engelen, 2002). In other words, it means to establish the semantic, material, economic and political boundaries of the constraints and opportunities governing how, when and why individuals decide to and have children (or not), and if so, how many children they have. Alongside this variety of factors that may potentially matter for reproductive choices in one geographical and historical location but not in another, one aspect becomes central for identifying how the context of
 constraints and opportunities becomes 'translated' into reproductive decisions and practices: communication.

Indeed, communication lies at the core of 'how people do and do not reproduce' (Hopwood, Jones, Kassell, & Secord, 2015, p. 379). Certainly, communication technologies and the knowledge these provide about sex and reproduction overall are key aspects for grasping the differences between, for example, what is knowledge and ignorance when it comes to sex, sexuality, and procreation (Hopwood et al., 2015). In a similar fashion, communication and knowledge are also closely attached to the emergence of authority and expertise (Hopwood et al., 2015), but more importantly to cultural life scripts (Boonstra, Bras, & Derks, 2014; Engelen, 2014), which in combination define constraints and opportunities in a given time and space. At the same time, 'communication is as uncertain and messy as reproduction can sometimes be' (Hopwood et al., 2015, p. 404). This often leads to unpredicted and unplanned changes in individual reproductive lives, which is often conceptualized through a theoretical lens of vital conjunctures (Johnson-Hanks, 2002; Kreager & Bochow, 2017; Sijpt, 2014). In short, a vital conjuncture is 'the zone of possibility that emerges around specific periods of potential transformation in a life or lives. It is a temporary configuration of possible change, a duration of uncertainty and potential' (Johnson-Hanks, 2017, p. 330). This view of reproduction as spontaneous implies that it is not only technologies of communication, and what is communicated and how, that are important. Who is communicating it and what type of silences, signals and conversations are understood by others and are perceived to be normative should also be included.

Communication through the lens of social interaction became promi-

nent as a structuring context for reproductive behavior half a century ago in the Princeton Fertility Project (Coale, Anderson, & Härm, 1979; Coale & Watkins, 1986), and subsequently in the diffusion approaches to studying fertility behavior which stemmed from it (Bongaarts & Watkins, 1996; Montgomery & Casterline, 1996; Pollak & Watkins, 1993; Watkins, 1991). These approaches were typically suggestive of the impact of socio-cultural structures emerging through everyday interactions that had an impact on fertility behavior and subsequent decline, especially when it came to explaining regional, local or community variations. Similarly to the First Demographic Transition Theory, and later to the Second Demographic Transition Theory, these studies were searching for commonalities surrounding fertility declines and their underlying structures, and in so doing were neglecting the fact that the differences in fertility behavior even within the borders of a single country may sometimes not be explicable by the same set of factors (Ehmer, 2011; Greenhalgh, 1995; Szreter, 1996; 2011).

However, the Princeton Fertility Project was by no means fruitless: it formed a foundation for focusing on how reproductive behavior is discussed in everyday life, or not discussed, which has important consequences for how we contextualize individual reproductive practices in the study of fertility declines today (Engelen, 2003; Johnson-Hanks, 2002; Kreager & Bochow, 2017; Van der Sijpt, 2011). One of the key figures of the Princeton Fertility Project, Susan Watkins (1990; 1991) suggests that significant people in a person's life, namely parents, friends and neighbors, influence individual reproductive behavior. As her departure point, she takes Anderson's concept of the 'imagined community' (Anderson, 2006 [1982]) and she applies it to the study of fertility. By exploring 19th century differences in marriage and childbearing patterns, she shows that these were not only visible on the national level, but also on the regional level. Watkins explains these differences by the fact that the most common factors behind whether an individual belongs to a particular region or community are language, religion, and ethnicity. Engelen (1987) also suggested that fertility behavior operates and is meaningful through 'regional cultures'. In practice, belonging to a certain regional culture may mean that in the process of day-to-day interactions a woman can learn from her mother, older sister or other females how to breastfeed, and in a similar way she could exchange with others her knowledge on abortion or other methods of 'bringing back' menstruation. Similarly, such information could be exchanged though gossip, which is also an important social in-

strument for permitting and approving certain behaviors (Watkins & Danzi, 1995).

What Theo Engelen and Susan Watkins described as empirically tangible, Simon Szreter has theorized through the concept of 'communication communities'. Szreter (1997; 2011; 2015) sees communication communities as entities in their own right, because they are not necessarily formed on the basis of universal rules such as language, religion or class. Individuals may belong to several communication communities over their lifetimes and at specific stages in life. Similarly, while living in different geographic locations and without knowing each other, individuals may still face similar constraints and opportunities with regard to having children (see for example Hilevych & Rusterholz, 2018; Pooley & Qureshi, 2016); this, as well as striving for similar social and cultural goals, could make them participate in the same communication community too. Through this lens, communication communities should be understood as 'encompassing socio-cultural environments of language, values, and roles in which individuals and families participate and through which they form and negotiate their meanings, goals, and social identities' (Szreter, 2015, p. 177). In this way, they provide us with "schemas for action and horizon of possibilities through which we navigate conjunctures" (Johnson-Hanks, 2017, p. 338) or, in other words, the social contexts of constraints and opportunities within which individuals exercise their agency (Baud & Engelen, 1997; Engelen, 2002).

When it comes to understanding changes in fertility behaviors, it is through communication communities that individuals negotiate, acquire, and reproduce their social and gender identities, and this subsequently has implications for the perceived relative cost of child-rearing (Szreter, 2015). In this sense, the role of communication communities is to mediate reproductive behavior through the means of both verbal and non-verbal communication, including daily routines, unreflective expectations and assumptions, and by simply observing the behaviors of others. This communication aspect is also a central element from which contextual difference between the communities and their sub-populations could emerge.

The next obvious question is how we identify communication communities. This brings us back to the issue of context outlined in the preceding pages, such as, for example, why in some localities religion may seemingly matter more for changing reproductive behavior than social class, language or urbanization, and vice versa. In this respect, understanding who is primarily involved in reproductive decisions (Johnson-Hanks, 2002;

Kreager & Bochow, 2017; Van der Sijpt, 2011) and hence whom the perceived costs of child-rearing primarily impact (Szreter, 1996; 2015) would be the first step toward underpinning the role of context in the study of reproductive behavior change. However, while in some communities having a child could be a shared decision between a husband and wife, it cannot be assumed that this is the sole or primary factor for any locality. This is primarily because power dynamics within a family and even outside it (see Heady, 2007) are crucial here. When looking, for example, into the power dynamics within a family, it could be that the role of childcare is shared between the wife and her mother(-in-law), which would increase their perceived costs of child-rearing and may make them the primary decision-makers, as studies across different localities have also shown (Bernardi & Oppo, 2008; Breengaard, 2016; Hertog, 2016; Rotkirch, 2000; Van der Sijpt, 2011). Let me illustrate this with reference to the example of Soviet Ukraine, where I observed similar child-rearing costs and responsibilities.

In one of the localities that I studied, I found that a husband was not seen as responsible for reproductive decisions (Hilevych, 2016a), but he was – for birth control (Hilevych, 2015). In turn, reproductive decisions and costs of child-rearing were primarily assumed by the wife, who would often rely on the help of her mother or mother-in-law in these matters. What is important here is that this female-centered childcare arrangement[1] is not new for this locality, since a grandmother has always played a key role in providing childcare here, even prior to the Soviet Union when extended family households were common (Hilevych, 2016b; Kis, 2012). What, however, does seem to make a difference for changing reproductive practices, leading to the limiting of family size, is the response of the female-centered family relations to the Soviet social policies. First of all, the re-legalization of abortion after 1955 certainly played a role in how birth control and childcare became perceived and practiced as two separate decisions; where the first would be a concern of a couple, and the second of a wife and her mother(in-law). More important for how reproductive decisions were made was, however, the introduction and rapid development of a new type of social housing in urban areas, which was primarily aimed at improving the welfare of nuclear families (Hilevych & Rusterholz, 2018). The new living arrangements no longer made it possible for close emotional and geographic proximity between generations to be maintained in the same way as it was in rural areas where several generations would have lived together. Furthermore, many men and women

were moving away from their families of origin to pursue their studies and engage in labor-force participation, sometimes in distant regions. The generations I interviewed, who were mainly born before the Second World War, were the first to experience this urban change. At the same time, many of them still had strong female-centered expectations of help with childcare. These expectations were often hard or even impossible to realize in these new living arrangements. These unmet expectations and the dependency on female-centered help, I argue, triggered the postponement of having a second child by up to 15 years, and sometimes even led to couples having no more children at all. In practice, these decisions led to the emergence of one-child families and subsequently to the phenomenon of the post-war fertility decline in this urban locality (Hilevych, 2016a; 2016b; Hilevych & Rusterholz, 2018).

Intriguingly, in another Ukrainian locality I studied, reproductive decisions were realized in a different way, despite the fact that the aforementioned Soviet social policy was the same. In this locality, the couple were seen as primary decision-makers in matters relating to both birth control and child-rearing. While parents (-in-law) were not key players, they still provided some essential support, especially in the early life-course (Hilevych, 2016b). In this respect, the living arrangements for nuclear families were serving the purpose of satisfying the standard of individual well-being in this context. The perceived costs of child-rearing were equally high for a wife and her husband. Some families practiced a male-breadwinner model until their childbearing intentions were realized and they often employed a shorter birth spacing strategy (up to 5 years). This spacing strategy seems comparable to the families in some Western European localities at that time (Fisher, 2006; Hilevych & Rusterholz, 2018; Rusterholz, 2017). Importantly, labor force participation for men and women was compulsory in the Soviet Union, which often implied that the male-breadwinner model was hard to realize in practice. As such, it was more common for spouses in this locality to share their responsibilities for child-rearing by equally distributing both childcare costs and participation in the labor force, while in terms of power dynamics a husband would often be in charge. Furthermore, although religion was officially banned in the Soviet Union, in this locality religion seems to have an impact on how abortion was practiced. Religion was seen less in relation to abortion as a woman's guilt, but rather in relation to the practice of abortion and contraception as a responsibility for procreation which was shared by both spouses (Hilevych, 2015).

While the reproductive realities in the two localities may seem to be specific to the Soviet Ukrainian contexts, they also illustrate two important and perhaps more general aspects of how 'communication as a context' matters for changes in reproductive behavior. First, they illustrate that when constraints and opportunities change, it primarily impacts those involved in reproductive decision-making, in other words, those whom the perceived costs of child-rearing specifically impact. As such, the key agents involved in reproductive decisions would be more inclined to find a new strategy for coping with the change before reaching out for help and support from other members in the family or community. In such a case, one may suggest that when a husband and wife are key agents in reproductive decisions, they may be more likely to reach out for help and communicate about these matters with other members of the community, namely the people to whom they are more likely to relate to, whether in terms of a shared religion, language, social class or kin/origin (see, for example, Heady, 2017). At the same time, when the key agents in reproductive decisions are a woman and her mother, sister or other relative, the situation can be more complex as intra-familial power dynamics would identify who actually makes the ultimate decision, and this may not necessarily be the woman who is actually carrying the child. Second, once the decision-making agents are identified, it may be easier to understand the role of the structural factors that matter for reproductive practices, such as the availability and use of childcare facilities, birth control, and parental leave, as well as women's educational attainment and full-time labor force participation. Altogether, these eventually create the context that is meaningful for reproductive behavior change as it is communicated between those who are involved in it.

UNDERSTANDING THE CONTINUITY: GENERATIONS AND THEIR CULTURAL MEMORY

As suggested above, the role of elder generations could be as important in reproductive decisions as that of spouses, i.e. biological parents. In fact, up until the 19th century, the term generation was used to discuss procreation and descent in scientific literature, after which these processes became framed through the lens of reproduction (Hopwood, Flemming & Kassell, 2018). In current discourses, reproduction is seen a process that involves generations, which are among the "principal, flexible cultural re-

sources on which men and women draw in making sense of their lives" (Pooley & Qureshi, 2016, p. 4). Here, generations should be seen in broader terms – as individuals who are both related and unrelated by their descent. To understand the role of generations in reproductive decisions implies the uncovering of how the knowledge of one generation, formed in a specific context, is passed on to the subsequent generation(s), where meanwhile the context of constraints and opportunities may have already changed. In this light, a generation could be seen as one of the key actors enacting change, as well as producing degrees and patterns of continuity (Bernardi, 2013) through which cultures of reproduction are communicated (Pooley & Qureshi, 2016).

To understand how reproductive norms, values and behaviors are communicated, exchanged and maintained across and between generations, as well as communication communities more generally, contemporary studies in the social sciences and humanities try to identify specific ways in which norms, values and behaviors are transmitted intergenerationally. Probably the most conventional way of thinking about intergenerational transmission, primarily between relatives, is through identifying the underlying mechanisms. Some mechanisms are more direct, such as socialization (for values and norms), while others are more indirect, such as role modeling, and mechanisms that could be mediated by behavior, such as the inheritance of status (Bernardi, 2016). An alternative way of looking at transmission is by applying the lens through which we see reproduction: both generation and reproduction could be seen as a process rather than a mere outcome (quoted from Bloch, 2005 in Pooley & Qureshi, 2016, p. 21). Among such processes of transmission, we might find (for example) implicit normative expectations, moral judgment, habituation, and memory (see for further details Pooley & Qureshi, 2016). Each of these processes is highly interlinked with others and, similarly to the first approach, this perspective also suggests the ways in which generations can 'communicate'. Among these processes, the notion of memory particularly stands out, as it also allows us to account for generation in its broader meaning, which not only includes parents and children, but also unrelated others who constitute the broader communication community.

One may define individual memory as an implicit way of thinking about the "dialogue between a person's past, present and future self" (Pooley & Qureshi, 2016, p. 29). The stories of generations comparing their parenting values to those of their parents, as they remember them, would be a prominent example here (Bernardi, 2013; Hilevych & Rusterholz,

2018; Pooley & Qureshi, 2016). But what about memories of the whole generation that are being passed down through experiences? Can we grasp those? And if so, what impact do they have on the reproductive behaviors of subsequent generations? This question is especially pertinent because it is not a straightforward one that solely concerns intergenerational transmission as a process, but it also concerns the knowledge of a specific context of constraints and opportunities that is being transferred. In this respect one may think about specific reproductive technologies and population policies that are aimed at enabling and suppressing reproduction, and how these are being 'translated', by a generation that witnessed them, to the next generations.

Perhaps in the contexts where fertility declines happened recently, these ways of 'translating' could be identified by simply talking to people (Szreter, 2011). At the same time, as societies witness certain changes, they may remember them by making this change meaningful in their own lives. This process is also known as cultural memory (Assmann, 2010). Some even suggest that one should think of culture as a memory (Assmann, 2010) because what generations remember from their history creates the context of culture as they pass it down. Through this lens, "cultural memory reaches back into the past only so far as the past can be reclaimed as 'ours'" (Assmann, 2010, p. 113), which in other words means that cultural memory is a 'received history' (cited from Young, 1997 in Hirsch & Smith, 2002, p. 9).

To understand reproductive practices though the lens of cultural memory means to understand how a certain context of constraints and opportunities that is meaningful for one generation is being transferred and 'translated' to another generation. For example, in both of the aforementioned Ukrainian localities, abortion became freely available in 1955 under the general Soviet abortion re-legalization law. However, in one locality, which became part of the Soviet Union in 1919 and which witnessed the first legalization of abortion in the world in 1921 (1922 in Ukraine), women whom I interviewed remembered and internalized the possibility of abortion as an option for when childbearing was too cost-intensive (Hilevych, 2015). When they themselves were growing up, these women also heard the stories of abortions taking place in their family or among neighbors. When these women were becoming mothers, they also saw, and discussed with other women, the possibility of abortion. In contrast, in another locality, the 1955 legalization was the first time when all the generations experienced free access to abortion. At the same time, some of the women I

interviewed did not know that abortion was legal after 1955 and they sought it from outside the official medical institutions. Although clandestine abortions were often performed by the same physicians as in the hospitals, these practices were officially illegal. For these women, abortion was a less desired option. Neither was freely available abortion a part of the cultural memory in the locality (Hilevych, 2015). To an even greater extent, abortion was still associated with as a back-street practice to be acquired only in extreme situations.

For a similar, more recent example of how certain constraints and opportunities are 'translated' to the next generation, one may think of the relaxation of the one-child policy in China. A study by Breengaard (2016) of one urban Chinese locality shows that the first two generations that witnessed this change rationalized and passed down the positive impact of the one-child policy to the next generations: namely, that both parents and grandparents can provide more care to one child. This intensive support from grandparents also allowed many men and women to engage in full-time labor force participation. In practice, however, this often implied that when the second generation became grandparents themselves, they would have fewer possibilities of providing the same type of child care to their children due to their lack of child-rearing skills. However, as Breengaard (2016) illustrates, the belief that one-child families provide better well-being to their children than the previous generations still persists and it is being 'translated' in this way to young couples.

CONCLUDING REMARKS

So, how can the two aforementioned aspects – 'communication as a context' and 'cultural memory of generations' – be meaningful for the study of continuity and change? In the same way that each of them can be a lens on its own, I suggest that they also inform each other in a meaningful way when looked at together. 'Communication as a context' is more than just a mere study of social interactions, who communicates with whom and what information they exchange. However, from the very beginning these elements are crucial for uncovering how and why individuals connect to each other in a certain way, and why sometimes they perceive and interpret the same constraints and opportunities in a different way, and vice versa. If considered from a social perspective, one may also say that these underlying structures that cause people to connect in a certain way are

actually what makes culture. Cultural memory could be conceived of as this common ground, especially when it comes to understanding the impact of recent social policies and introduction of new technologies on social change, and how these become adopted and internalized (or not) by different sub-populations. In the same way that the process of internalizing new norms and values around reproduction may continue across many generations by means of transferring cultural memory, generations may also forget the past, if it is not meaningful to them. As such, the concept of cultural memory helps to identify important key points in history that are meaningful for reproductive decisions in a specific locality. In this respect, cultural memory becomes a means to transfer and 'translate' a context of constraints and opportunities from one generation to another. Finally, these ways of 'translating' can produce new social inequalities and reproduce old ones, which we as sociologists and historians ultimately aim to uncover in our works by employing the lens of continuity and change to study demographic and social phenomena.

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1. Bernardi & Oppo (2008) also found this type of family arrangements in Southern Italy, Rotkirch (2000) defined it as 'extended mothering' in Russia, and in evolutionary theory in evolutionary theory this type of arrangement is given as an example of the general phenomenon of humans being 'cooperative breeders (Hrdy, 2011).

[10]

JAN KOK

Pigeon pairs and rich folks' dreams. The (lack of) sex preferences for offspring in the Netherlands, 1850-1950

In various publications, Theo Engelen charted the decline of fertility in the Netherlands, which he described as a shift from 'fate' to 'choice' (Engelen, 2009). Gradually, people abandoned the old notion that children were a 'gift from God', and that their number could not and should not be limited. After 1880, the more modern notion of family size as a matter of choice became apparent in the rapid decline of marital fertility rates. However, there was a huge social and cultural variation in both the perception that fertility could be controlled and the desire to actually do so (Engelen, 1987; Engelen & Hillebrand, 1986). Thus, the timing, speed and intensity of the transition towards smaller families depended both on religious beliefs and the economic benefits of children. This led to a large range of family sizes. For example, in the census of 1960 non-denominational white-collar workers reported 2.5 live-born children per marriage, whereas Roman Catholic farmers reported no less than 7.2 (Engelen 2009, p. 85).

Did people, in opting for a smaller family, take account of the sex composition of their family? In other words, did they stop having children earlier once they had produced a desired set of sons and daughters? In many societies, sex preferences are related to fertility. A strong preference for sons can result in high fertility, in the absence of sex-specific abortion or infanticide (Oppenheimer, 2001; Seidl, 1995). In many cultures, even in those preferring sons, parents hope to have at least one child of each sex (Anderson, Hank & Vikat, 2006). This means that a preference for a 'mixed' offspring set can also lead to higher fertility, when parents who only have children of one sex continue to have children.

In this chapter, I aim to study whether and how sex preferences affected the Dutch fertility decline. When parents desire a small family, they often also prefer to have a child of each sex. Old sayings refer to the wish of hav-

ing one son and one daughter as 'the royal wish' (*koningswens*) or the 'rich folks' wish' (*rijkeluiswensch*) (Stoett, 1923-25). In England, this ideal family composition is known as the 'pigeon pair'. But how old is this preference? Can we find evidence for the desire for a mixed set of offspring, e.g. in continued childbearing after, say, two, three or four sons or daughters? Among American couples born in the early 1900s, progression to the third child was clearly determined by the sex composition (Raley & Bianchi, 2006). In the German countryside, too, a preference for a mixed set of offspring was already visible among couples marrying between 1875 and 1900 (Sandström & Vikström, 2015). Reher et al. (2017) found similar outcomes for Dutch couples after 1900, whereas in the period between roughly 1875 and 1900 no clear preference was found.

But why would the sex of children matter at all? The literature suggests a shift in preferences accompanying socio-economic change. In societies where parents depended strongly on the economic contribution of their sons, even after their sons' marriages as in many patrilineal societies, a strong preference for sons was found. Examples of this phenomenon are China and India. But in Europe as well, the preference for sons or daughters depended for a long time on their perceived benefits, which differed by sex. Daughters were welcomed for the social help they could give to ageing parents, and daughter preference appears to be related to the type of welfare regime (Gray & Evans, 2005). However, in recent stages of economic development, benefits of children came to be replaced by perceived (opportunity) costs, and in the 'value' of children psychological benefits came to play a larger role. Parents found and expressed their identity through children, and father-son and mother-daughter bonding formed an important element in psychological fulfillment (Hank & Kohler, 2000; Mills & Begall, 2010). This explains why in the shift towards small families – in itself part of the rise of individualism – sex preferences became stronger (Gray, 2004). However, even in contemporary Europe, sex preferences are not 'universal' or similar. A survey of seventeen countries (the Netherlands not included) disclosed that in one-third of the countries the progression to the third child was not affected by a sex preference, while in the other countries, both a preference for a mixed set as well as a girl preference (in Portugal, the Czech Republic, and Lithuania) was found (Hank & Kohler, 2000). In countries with low gender equity, the preference for boys is still strong (Mills & Begall, 2010). Thus, sex preferences, although undoubtedly embedded in traditional norms, can shift due to economic changes and the rise of welfare states, and due to the changing

value of children. The preferences also depend on parity – apparently they are particularly relevant in the progression to the third or the fourth child, as the motives regarding whether to have children at all dominate decisions surrounding lower parities (Bulatao, 1981).

Recently, Reher et al. (2017) analyzed the effect of sex composition of the family on parity progression, comparing Spain, Sweden and the Netherlands. The outcomes of their analysis are very intriguing, since they suggest that in the Netherlands, in contrast to Spain and Sweden, no preference for male offspring existed before the fertility transition. In their study, they pooled all parities 3-8, which makes it difficult to distinguish between couples who wanted to control their family composition and those who did not. Moreover, they did not compare sex preferences in offspring across social groups or religious denominations, nor did they contrast cities and countryside. This contribution aims to add these perspectives. I hypothesize that, if a preference for a mixed set of children emerged, this happened in the same social groups which were also forerunners in limiting family size: (urban) elites and Liberal Protestants.

Detecting changing or emerging sex preferences for offspring in the Dutch past, differentiated by social and religious groups, requires high-quality data. In the next section, we will discuss the data and the methods we applied for this research. Then we will take a look at parity progression rates by sex composition. Next, we will proceed to a comparison with the findings for the 19th-century German countryside, by using a similar approach focusing on the transition to the fifth child. Finally, we will try to find the forerunners of the mixed two-children family ideal. I emphasize the word 'try', as it will soon become apparent that sex preferences were largely absent before 1950.

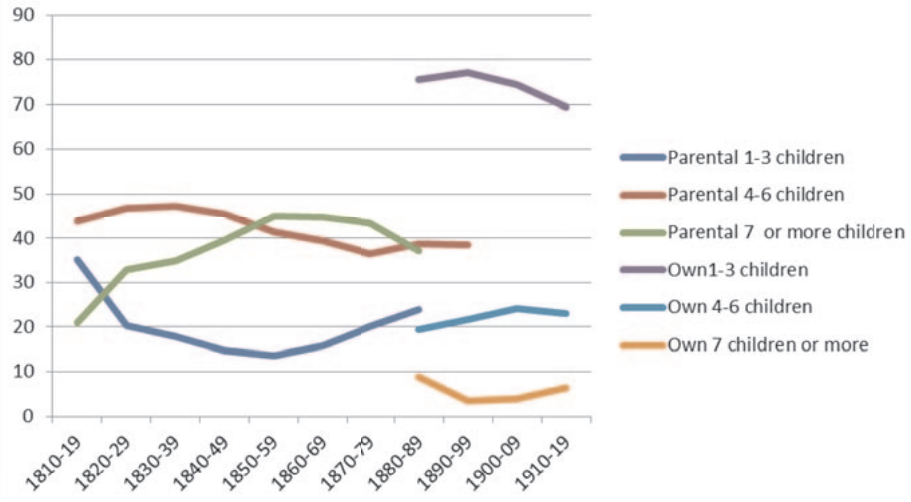
DATA AND METHODS

If we are to trace shifts in sex preference, e.g. from a preference for sons to a preference for mixed offspring, we require data covering a long period. Ideally, this data will include different contexts (urban and rural settings), different social groups (to account for the effect of household production), different religions, the age of the mother, and the survival status of the children. A dataset that matches these criteria is the Historical Sample of the Netherlands (Mandemakers, 2006). The sample of Research Persons is drawn (0.5%) from birth certificates (1812-1922). Research Persons born

after 1862 (in some regions from 1850 onward), are tracked in their entire life courses, including family formation, using the population registers. This implies that we have good information on fertility decisions after about 1890. This data has also been used by Reher et al. (2017), but we would like to cover an earlier period as well, since in some social groups fertility decline had already begun before 1880/1890. To discover sex preferences *before* the onset of the fertility decline, we can also make use of the data on the family of orientation of the Research Persons. But this comes with some methodological caveats. As the sample is drawn from the birth certificates, children from large families have a greater likelihood of being selected than children from small families. Thus, although the children are representative of their generation, their parents are not. To demonstrate the effects of this 'bias', Figure 1 shows the distribution of completed families (i.e. the parents are observed at least until the mother reached age 45), differentiating between the family of orientation of Research Persons and their own families. The latter information is derived from a database of Research Persons marrying in the inter-war period (between 1918 and 1939) (Van Bavel, Kok & Engelen, 2008). Only fertile couples are included in the analysis. The two 'samples' show a very different picture. Whereas small families are a minority in the family of orientation, even when the mother was born in the 1880s, they strongly dominated the families of the Research Persons themselves. Thus, the fertility decisions of parents of Research Persons clearly cannot be taken as representative of Dutch couples in general. We do see some interesting trends, however. Due probably to declining mortality, we see a remarkable increase in the share of large families among (maternal) birth cohorts 1810-1860. After birth cohort 1850/59, the share of small families increases. In the 'own' families, we witness a decline in the share of small families, which is probably due to the Baby Boom.

In this chapter I use, with necessary caution, data from the parental families (building on Vermunt 2017, N = 36,974) and from the inter-war dataset (N = 3,099). Both datasets are harmonized and integrated. Apart from the surviving 'sibset' at each parity, I include variables on socio-economic status, religion and place of residence. Social groups are classified according to the HISCLASS codes of the occupations of the fathers (Van Leeuwen & Maas, 2011), religious denominations according to the scheme proposed by Kok (2017), and urban-rural localities according to the definitions by Kooij (1985).

Figure 1 Distribution by family size (surviving children) of the family of orientation (parental family) and family of procreation (own family) of Research Persons of the Historical Sample of the Netherlands, by birth cohort of the mother/wife.



PARITY PROGRESSION

Although the data, as described above, do not form the best indicators of fertility levels, this should not affect a comparison of parity progression by family composition. My interest here is in whether stopping or continuing with having children depended on having a mixed-sex group of children, or having only boys or girls. And do I find differences already after two children, or particularly at higher parities as predicted in the literature? In Figures 2, 3 and 4, I show progression rates by birth period of the second, third and fourth (surviving) child, respectively. I only include those natal families in which the Research Person had already been born.

When there is a (growing) preference for mixed offspring sets, we should see this reflected in lower parity progression rates compared to sets consisting of only boys and only girls. Also, on average, couples with a strong son preference will continue to have children if they have only girls. Figures 2, 3 and 4 do not show a consistent sex preference. The rates for the progression from the second to the third parity (Figure 2) are remarkably similar, suggesting the absence of any preference. In Figure 3, it seems as if the relatively low progression rates for families with only boys in the 1870s reverses between 1910 and 1930. Figure 4 is also difficult to interpret:

Figure 2. Parity progression by birth period of the second surviving child and by composition of the family (1850-1949).

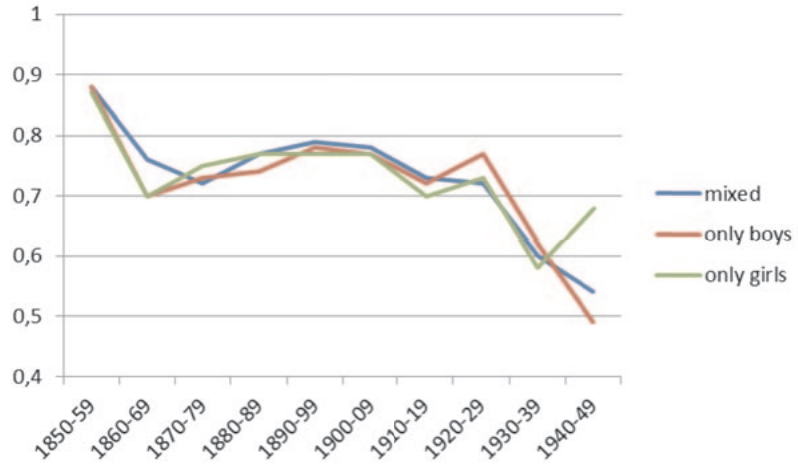
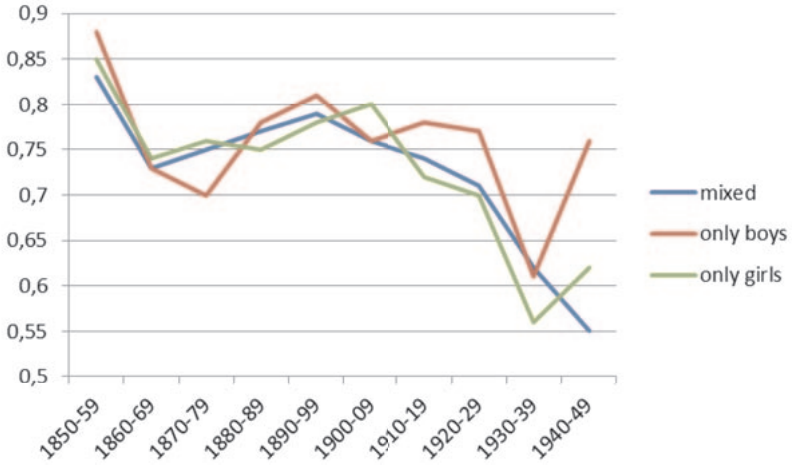


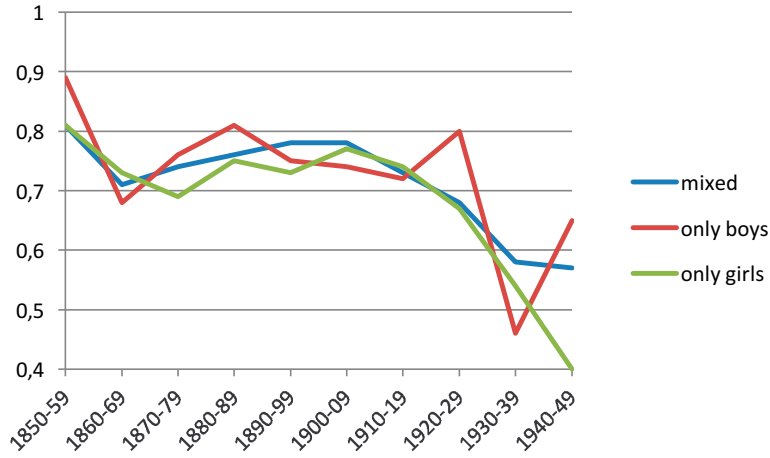
Figure 3. Parity progression by birth period of the third surviving child and by composition of the family (1850-1949).



overall progression rates for 'only boys' seem to be higher than for 'only girls', which might indicate that parents would rather have at least one girl than at least one boy.

My findings corroborate the outcomes of Reher et al. (2017) who found, after 1900, elevated hazard ratios of a next child of couples having only boys. However, we can see that this mattered for the progression to the fourth and fifth parity much more than to the third. These graphs may be

Figure 4. Parity progression by birth period of the fourth surviving child and by composition of the family (1850-1949).



influenced by changes over time, for instance in the age at childbirth, and they may hide important variation, for instance by social group or the share of people living in cities. To tackle those problems, we need a multivariate approach.

PROGRESSION TO THE FIFTH CHILD. A COMPARISON WITH RURAL GERMANY

Knodel and De Vos (1980) did not find evidence for sex preferences in eighteenth- and nineteenth-century Germany, which puzzled them as they had expected at least a preference for sons. Recently, Sandström & Vikström (2015) repeated their analysis, focusing on the progression from the fourth to the fifth child, a parity at which deliberate stopping was most common in the population studied by Knodel and De Vos (1980). However, Sandström and Vikström used event history analysis, which takes account not only of the event of the birth of a next child, but of its timing as well. Often, a failed attempt at stopping is visible in a long birth interval. Using this technique, they did find a clear son preference until (marriage cohort) 1875, changing into a preference for a mixed offspring after 1875. By emulating their method, and thus specifying Cox regression models in a similar way, my aim is to see whether a similar pattern can be found for the Netherlands as well. Admittedly, I have used birth cohorts of

children, whereas Sandström & Vikström make distinctions between marriage cohorts of parents.

The method implied that all intervals were calculated between the fourth (surviving) child and the fifth. If no fifth child was born, but the family was still observed, the episode was 'censored' after six years. If the family was observed for a shorter period (e.g. through the death of the mother), censoring occurred earlier. To make the outcomes as comparable as possible, I tried to include similar controls for socio-economic status, area (in my case rural or urban) and the mother's age. However, I also controlled for religion. As Engelen (2009) has shown, religion was a crucial variable in fertility control, at least before 1960.

In table 1, the reference category is always a mixed offspring set. Each row represents a separate model, of which the control variables are not shown. The first rows show the outcomes (relative likelihoods) of Sandström and Vikström. In the fourteen German villages originally explored by Knodel and colleagues, couples marrying between 1825 and 1849 only exhibited a boy preference: the relative chances of a next child were 22% higher when the couple had four surviving girls compared to when they had both boys and girls. When they had four surviving boys, however, they responded in the same way as parents of a 'mixed' set. In the marriage cohort 1850-1874, the boy preference even increased. However, couples marrying after 1875 also showed a desire to continue with childbearing when they had four girls. Sandström and Vikström (2015) see this as a clear indication of an emerging preference for a mixed set of children.

The Historical Sample of the Netherlands makes it possible to run similar models, but also to zoom in on regions and groups of interest. Thus, I run separate models for town, countryside, farmers, middle class, skilled workers, unskilled workers, Liberal Protestants, and Roman Catholics (Table 1). It would have been interesting to look even more closely at expected 'forerunners' such as the elite or Jews, but their numbers are too small. My exercise does not yield clear results. Neither people living in rural areas, nor farmers, show a statistically significant larger likelihood and speed to progress to a next child when they had four sons or four daughters. It is unlikely that the difference with Sandstöm & Vikström's findings is caused by a much earlier onset of the fertility decline in Germany than in the Netherlands. At any rate, the total fertility rates of both countries did not diverge strongly before the First World War (source: www.gapminder.org; see Ajús & Lindgren, 2008). Occasionally, I do find significant results, but they are not very consistent. In the period 1925-1949,

the middle class appears to have a preference for a mixed set of children, and especially for continuing with childbearing when they had only girls (2.6 times more likely than the reference category of a mixed set). The pattern seems to have started in 1900-1924 when they also exhibited a higher likelihood of having more children in the case of only girls (borderline significant). Another finding relates to the 'Liberal Protestants' (Dutch Reformed, Lutherans, Mennonites and Remonstrants, see Kok, 2017) in the period 1875-1899. When they had only daughters, they tended to stop more often. Borderline significant findings are the greater likelihood and speed of proceeding to the next child for couples with only boys in cities between 1850 and 1874 (+35%), skilled workers in the same period (+40%), and middle-class couples in 1875-1899 (+35%). Indeed, it is interesting to see that in many cases the relative chances of a next child for 'only boys' are higher than for 'only girls'. Apparently, parents wanted to have at least one girl more than they did at least one boy. Again, this corroborates the findings of Reher et al. (2017).

Table 1. Relative likelihood (Cox regression) of progression to a fifth child.

	1825-49		1850-74		1875-99		1900-1924		1925-1949	
	Only boys	Only girls	Only boys	Only girls	Only boys	Only girls	Only boys	Only girls	Only boys	Only girls
Marriage cohorts of parents										
14 German villages	0.96	1.22*	1.08	1.32*	1.27*	1.29*				
Birth cohorts of children										
Dutch countryside			0.98	1.04	1.09	0.93	0.97	1.02	1.13	0.83
Dutch cities			1.35†	1.02	1.01	0.87	0.91	1.01	1.06	1.18
Farmers			1.04	1.08	1.04	0.81	1.06	0.98	0.86	0.97
Middle class			0.94	0.90	1.35 †	0.86	1.00	1.37†	1.47	2.61*
Skilled workers			1.40†	1.14	1.05	0.97	0.85	1.18	1.43	0.71
Unskilled workers			1.02	0.98	1.02	0.89	0.94	0.92	1.14	0.84
Liberal Protestants			1.10	0.93	0.93	0.79**	0.93	1.06	1.41	0.82
Roman Catholics			1.01	0.95	1.08	0.92	0.87	0.96	1.02	0.89

†p,0.1, *p < 0.05; **p < 0.01. Based on Sandström & Vikström (2015, pp. 65 and 67); hsn release 2010. As we do not know in most cases when the parents married, the outcomes are ordered by the birth date of the (fourth) child. Controls include age of the mother, urban/rural residence, religious denomination and socio-economic status. Only those parental families are included in which the Research Person had already been born.

So far, focusing on higher parities has not brought much substantive evidence of sex preferences in the Netherlands before 1950. But perhaps we should focus on lower parities. Perhaps couples deciding to have a small family – a trend which started in the first half of the twentieth century – were actually more likely to consider the sex of their children than couples who already had a sizeable family. In the next experiment, I select couples having a second (surviving) child after 1900. Moreover, I only select couples in which the mother was younger than forty. In principle, these couples could still go on to have a third child, if they so wished.

In table 2, the outcomes of the event history analysis are presented. The
500 first model only includes the composition of the family, and we can see that it does not have any effect on progression to the third child. The contrast with the control variables in model 2 is striking. Compared with rural couples, couples in cities are much more likely to delay or forego the arrival of a third child (-22%). Also, the socio-economic differentials are as expected. All social groups have a lower likelihood of a third child than the farmers. The smallest difference in likelihood exists with the unskilled workers, who probably still counted on the future (wage) incomes of their children. Religion clearly has an autonomous influence as well (see also Engelen 2009, p. 76-84). Compared to the Roman Catholics, all groups have lower likelihood of a third child, especially people with no religion, Liberal Protestants, and Jews.

We would expect forerunners of the two-child family consisting of a boy and a girl to live in cities, to be from the higher or middle class, and to have no or lenient religious beliefs concerning the possibility of choosing one's own family size, let alone its composition. To find those 'pioneers of the pigeon pair', we add a number of interactions to the model. In Model 3 we interact the sex composition of the two-child family with living in a city. We see that the interaction points in the direction of a preference for a mixed family in cities, but that only the effect of having daughters is significant. In other words, couples living in cities having two daughters were more likely to go on having children than urban couples with a mixed offspring set. Model 4 presents the same exercise with middle class couples, but the outcomes are not significant, and neither is the exercise of calculating an interaction with elite status (not shown here). Religion, as so often, turns out to be a better predictor of demographic behavior. An interaction of family composition with Liberal Protestant denomination

Table 2. Relative likelihood (Cox regression) of progression to a third child, period 1900-1950, mothers younger than forty

	Model 1	Model 2	Model 3	Model 4	Model 5
Mixed=ref					
Only boys	1.04	1.05	1.04	1.06	1.01
Only girls	1.03	1.03	0.99	1.02	0.98
Rural=ref.					
Urban		0.78***	0.76***	0.78***	0.79***
Farmer=ref.					
Elite		0.68**	0.69**	0.68**	0.68**
Middle class		0.72***	0.73***	0.73***	0.72***
Skilled worker		0.77***	0.77***	0.76***	0.76***
Unskilled worker		0.85***	0.85***	0.85***	0.85***
Other/unknown		0.67***	0.67***	0.67***	0.66***
Roman Catholic=ref.					
Liberal Protestant		0.62***	0.62***	0.62***	0.59***
No religion		0.47***	0.48***	0.47***	0.45***
Orthodox Protestant		0.76***	0.75***	0.75***	0.76***
Jewish		0.64**	0.63**	0.63**	0.63**
Other religions		0.71***	0.71***	0.71***	0.71***
Only boys*urban			1.07		
Only girls*urban			1.19*		
Only boys*middle class				0.94	
Only girls*middle class				1.05	
Only boys*Liberal Protestant					1.17*
Only girls*Liberal Protestant					1.21**
Chi-square	1.38	393.03***	399.18***	393.98***	404.01***
n	6,838	6,838	6,838	6,838	6,838

*p < 0.05; **p < 0.01., ***p<0.001

shows a clear preference for a mixed family. A similar, but statistically weaker, result was found for non-denominationals (only boys* no religion=1.13, p=0.619; only girls * no religion=1.76, p=0.029).

Our exercise has taught us that, overall, sex preferences did not play a role in the decision to have a third child. To some extent, the lack of a 'general' effect may have been caused by counteracting (or cross-over) effects, for instance when the rural population had different preferences from the urban one, or the Protestant population from the Catholic one. To account for such cross-over effects, we added a number of interactions to the model, which did indeed suggest that effects differed by subgroup. The clearest indication of a preference for having (at least) a boy and a girl was found among Liberal Protestants. Research using the same definition of this religious group, and contrasting it in a similar way (multivariate analyses using the Historical Sample of the Netherlands) to Roman Catholics

has shown a (significant) higher tendency of childlessness, of having only one child, of more spacing and earlier stopping with childbearing (Kok 2017, p. 73). To these indicators of birth control we can now add that of stopping after the second child when the two children were of different sexes.

CONCLUSION

This brief exercise in historical demography has shown that sex preferences for offspring were virtually non-existent in the Netherlands before 1950. In so far as we did find evidence, it was (statistically) weak and inconclusive. This should not come as a surprise. We have seen that, even in contemporary Europe, in one-third of the countries surveyed, sex preferences are absent. Furthermore, the literature suggests that such preferences are more likely to be found in low-fertility regimes, whereas the period we studied was still characterized by relatively high fertility. However, Reher et al. (2017) did find indications of a Dutch preference (after 1900) for a mixed offspring set, particularly when there was still no girl. This different result might have been caused by their clustering of all parities, and/or by their inclusion of the death of the last child as a time-dependent variable. It might be advisable to emulate their model as well. However, the difference with the clear findings for the nineteenth-century German villages is also striking. The Historical Sample includes a wide variety of people (differing by type of locality, by occupation, by religion) and perhaps a greater similarity in social conditions and cultural norms accounts for the unequivocal German response to a non-mixed offspring set. However, the villages are spread across Germany, and include different religions and inheritance rules (Sandström & Vikström 2015, p. 61). It is more likely that my sample consists of many different groups, perhaps to be labelled *communicating communities* (Szreter, 1996), with different norms regarding whether to control family size at all, on what would be the ideal size, and on what would be an ideal composition. Such norms would be communicated within local (or national, depending on the types of communication mechanism) communities. Adding all these communities together may lead to cross-over effects, resulting in limited overall outcomes. At the very least, my analysis of the arrival of the third child has shown that Liberal Protestants in contrast to Roman Catholics were more likely to stop having more children when they had a boy and a girl.

In his work on the fertility decline, Theo Engelen has argued for models charting motivation and for acceptance of the idea that couples could control their own family size. He argued that understanding how, when and why reproductive mentality changed was crucial to unraveling the different regional courses of the fertility transition (e.g. Engelen & Hillebrand, 1990). I argue that mentality change may not only be visible in the desire to control the number of children, but also in their sexes. However, such a desire does not seem to be part of the Dutch fertility transition before 1950.

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[11]

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Measuring fertility control in historical demography using cohort parity analysis: application and evaluation

Methods that have commonly been used in historical demography to document the decline of fertility include Ansley Coale's I_f and I_m indicators (see the insightful study by Engelen & Hillebrand (1986) on fertility and nuptiality in the Netherlands), Coale & Trussell's (1978) M&M model and, more recently, elaborate event history models that try to measure deviations from natural fertility (e.g. Van Bavel & Kok, 2010). While these methods are very important and useful for gaining a deeper scientific understanding of birth control in historical populations, they are not very good at communicating "the story behind the tables". For example, none of the methods mentioned answer the intuitive and "simple" question of what proportion of couples were actually controlling their fertility and how intensely they were doing this. This is unfortunate, as it hinders the building of bridges between the work of historical demographers and the general public. As was pointed out by Theo Engelen when he accepted the Chair in Historical Demography at Radboud University, one needs to be able to bring to life "the story behind the tables" in order to accomplish this.[1]

This paper will introduce, use and discuss a method that aims to yield an intuitively more accessible analysis which is able to "bring the story" of birth control in history. Paul David and colleagues (David et al., 1988; David & Sanderson, 1990) designed Cohort Parity Analysis (CPA) to do exactly that: to estimate (a) the proportion of couples practicing birth control (called the extensiveness of birth control) and (b) how strong the limitation of births is among those practicing birth control (called its intensity). CPA measures the extensiveness and intensity of fertility limitation indirectly, based on the frequency distributions of final parity attained by couples at given marriage durations and given a specified age at

marriage. CPA proceeds by comparing the distributions observed in the target population with the distributions in a standard model population. The goal is to measure the extent and intensity of contraception in the target population while the model population is assumed not to practice contraception and is chosen on that basis. Differences between both distributions are used to estimate parity-specific minimum and maximum proportions of couples in the target population who are effectively limiting their fertility (David & Sanderson, 1988).

The goal of this paper is first to investigate the underlying assumptions, then to try to apply it to three cohorts based in nineteenth-century Leuven, Belgium, and finally to critically evaluate the merits and limitations of the method.

ASSUMPTIONS

The basic input parameters are the relative frequency distributions of parity attained given marriage duration d and woman's age at marriage a. Based on this, CPA yields unbiased and efficient estimates of the minimum and maximum proportions practicing birth control if one can accept the following three assumptions to hold for each marriage cohort (David & Sanderson, 1988):

1. the target cohort (a,d) would have the same parity distribution as the model cohort (a,d) if there was no contraceptive behavior, and any difference between the distributions is a consequence of birth control practiced in the target cohort;
2. for each cohort (a,d) there exists a parity k which will never be attained by couples who are effectively practicing birth control; couples having k children or more are assumed not to practice effective birth control;
3. couples from a cohort (a,d) who intend to practice birth control after having had i births are no different in terms of fecundity from couples who do not intend to practice birth control after having attained parity i. The authors call this the conditional independence assumption: given attained parity i, the fecundity of couples is independent from their fertility control intentions.

The first assumption is the most important and most basic one underlying the CPA approach. As we will see, violations of this assumption are the greatest threat to the accuracy of its estimates. In the next sections, I start

by assuming that all three assumptions are correct, no matter how problematic some of the assumptions, or the hidden sub-assumptions underlying them, may be. After implementing CPA and interpreting the results, we investigate the implications of violations of each of the assumptions.

ESTIMATION

If all contraceptive couples have at most k-1 births in a given marriage cohort (a,d), then we may group all couples having k births or more together, so that k becomes the highest parity considered. Let k refer, therefore, to all couples having had at least k children. Let t refer to the target cohort and n to the model cohort. The latter is assumed to exhibit so-called natural fertility. For convenience of notation, we will drop the double subscript (a,d) because it would need to be added everywhere: all calculations need to be carried out for each age at marriage and marriage duration separately.

In its calculations, CPA employs the upper cumulative parity distributions, i.e. the proportion of couples having j or more births. Let $t(j)$ be the proportion of couples in the target cohort having attained parity j, then the upper cumulative distribution $T(j)$ is the probability distribution that a given couple from the target cohort produced j births or more:

$$T(j) = \sum_j^k t(j) = T(j+1) + t(j).$$

N(j) is the analogue for the natural fertility model cohort, summing $n(j)$ up to n(k).

Next, designate the proportion of couples in the target cohort with j births who practice contraception with $c(j)$; so $c(j)$ is the probability that a couple of target cohort (a,d) ever practiced contraception *and* had j births. In line with this, $c_L(j)$ is the lower bound for this probability and $c_U(j)$ is the upper bound, such that $c_L(j) \leq c(j) \leq c_U(j)$. David et al. (1988) provide mathematical proof that the following simple calculations, based on the observed proportions $n(j)$ and $t(j)$ and their respective upper cumulative distributions, provide efficient and unbiased estimates of these lower and upper bounds:

$$\hat{c}_L(j) = T(j) - \frac{T(j+1)N(j)}{N(j+1)}$$

en

$$\hat{c}_U(j) = t(j) - \frac{n(j)t(k)}{n(k)}$$

These estimates are efficient in that the upper bound is as low as one can tell, given the data, and the lower bound is as high as one can tell, such that the margin between the two is as narrow as warranted. They are unbiased if the three CPA conditions are true. David et al. (1988) provide full mathematical details, while David and Sanderson (1988) provide an intuitively more accessible explanation. Here, we limit the discussion to the assumptions, concepts and parameters that are needed for a proper interpretation of the results.

The fact that CPA yields upper and lower bounds rather than one point estimate of the proportion of unions practicing contraception is a consequence of the fact that there are two different contraceptive strategies within marriage, called stopping and spacing. (One could also distinguish

a third strategy called "starting", but CPA treats it as a form of spacing, namely spacing the interval between marriage and first birth). According to CPA terminology, perfect stopping takes the following form: use no methods of contraception until the couple has produced the desired maximum number of children; when the maximum desired parity is attained, have no more children. Hence, perfect stopping implies impeccable contraceptive (or abortive) techniques: those who do not want more than *j* children will never have more than that number (but they may have less, due to natural fertility limitations). David et al. (1988) show that if all contraception-using couples from the target cohort were to practice perfect stopping, their actual proportion *c(j)* would be equal to the lower bound estimate $c_L(j)$ from equation (5). Hence, that lower bound refers to the hypothetical scenario in which all marriages practicing contraception after the birth of child *j* are observed to have *j* as final parity.

Conversely, the upper bound $c_U(j)$ refers to the scenario in which all couples practice pure spacing. This hypothetical scenario occurs when all couples start their contraceptive behavior from the beginning, i.e. at parity zero (note again that the strategy which is often called "starting" is treated in the same way as spacing here – later, we will see that this simplification will lead to biased estimates in the case of pre-nuptial pregnancies). In contrast to the perfect stopping situation, pure spacing implies that all potentially contraception-using couples are actually beginning to practice contraception, since all start at parity zero. The number of children born at marriage duration *d* depends on how intense the spacing is (so on the length of the birth intervals), which depends on the effectiveness of the contraceptive efforts and the desired interval length, and / or on the number of children the couples eventually want to have. Estimation of

$c_U(j)$ proceeds on the basis of the potential implications of pure spacing. David et al. (1988) show that this upper bound is really the maximum value that the proportion of contraception-using couples $c(j)$ can possibly take – always with the condition that the three CPA-assumptions are true – whatever the actual mix of fertility control strategies.

From earlier applications of CPA (David et al., 1988; David & Sanderson, 1988; David & Sanderson, 1990; Ó Gráda, 1991; Van Bavel, 2002) it turns out that the interval between lower and upper bound estimates is small enough to be informative and to allow useful interpretation. Usually, the upper bound is just a couple of percentage points higher than the lower bound. Furthermore, Okun (1994) used simulation to confirm the precision of CPA and to demonstrate that the upper and lower bound estimates really are the maximum and minimum values between which the actual proportion $c(j)$ will always fall, even in very divergent circumstances.

Once the distributions of the upper and lower bounds $c_U(j)$ and $c_L(j)$ have been calculated, the next step is to estimate the average intensity of fertility limitation. The more births are effectively avoided by contraception-using couples, the higher the proportion of low-parity couples among all those who practice contraception. In contrast, if fertility limitation is less intense, many contraceptive couples will still have many births. The more intense the fertility limitation, the lower the average number of births among contraception-using couples (equal to $\Sigma[j \cdot c(j)] \,/\, \Sigma[c(j)]$), and the lower parity k which will never be exceeded by contraception-using couples. (Note that the definition of k implies that $c(k) = 0$.)

Summing all $c(j)$ (i.e. the proportion of contraception-using couples among those reaching parity j) over all parities j yields a summary measure for the extensiveness of fertility control: the proportion of couples that has ever practiced contraception in the given target cohort. In principle, the extensiveness of birth control is independent from its intensity. Limited fertility in the target cohort, compared to the model cohort, can be the result of many couples practicing contraception to a small extent, or of a smaller group practicing it more intensely.

APPLICATION AND RESULTS

As mentioned above, we will address the implications of violating the three CPA-assumptions at a later stage. For now, we will provisionally accept them and will simply apply the approach to three cohorts of married

couples who were living in the Belgian city of Leuven in the nineteenth century, based on whether the wives were born in 1830, in 1850, or in 1864 (Van Bavel (2002) explains the rationale for choosing these three cohorts). We designate these cohorts C1830, C1850 and C1864, respectively.

TARGET AND MODEL POPULATIONS, SELECTION OF K

First, we need to select model and target populations. The first assumption states that the model population is supposed to have natural fertility in that it does not apply fertility controls. Based on conventional methods, C1830 is well qualified to serve as the model population, since it exhibits no parity-dependent fertility limitation (Van Bavel, 2002, p. 83-120; Van
510 Bavel, 2003). C1850 and C1864 are the two target populations.

In order to apply CPA, one needs to disaggregate all cohorts by woman's age at marriage and marriage duration. Following the common practice of looking at five-year age intervals, I focus on three age-at-marriage groups: 20-24, 25-29 and 30-34 (the number of observations in the other age-at-marriage groups were too small to yield reliable results). Attained parity is measured after exactly 5, 10 and 15 years of marriage. It was not feasible to look at higher marriage durations due to a limited number of observations, when broken down by woman's age at marriage. As shown in Table 1, the number are in any case quite low for women married between the ages of 30 and 34. Therefore, for this group, the CPA estimates are the least robust.

The next step is to determine k: the number of births that will never be reached by couples practicing contraception. David et al. (1988, Appendix C) suggest taking the parity closest to the 80^{th} percentile at the right hand side of the $n(j)$ distribution. CPA assumptions imply that for each parity $j < k$ the following inequality holds: $N(j+1)/N(j) \geq T(j+1)/T(j)$. This amounts to the requirement that parity progression ratios in the target cohort may never exceed the ones in the model cohort (see note 13 in David et al., 1988).

The suggestion of taking the 80^{th} percentile is based on one single sample in which the proportion of contraception-using couples was known from a survey. When applied generally, this rule of thumb will yield values of k that are too high if the intensity of fertility control is high, with the result that contraception-using couples will not even come close to reaching parity k. (The implications of choosing a value of k which is too

Table 1: Number of marriages by woman's age at marriage (in completed years) and by exact marriage duration

Cohort	Age at marriage	Marriage duration 5	10	15	20	25	Total
1830	15-19	10	9	9	7	4	39
	20-24	**79**	**70**	**49**	39	21	258
	25-29	**65**	**50**	**39**	30	8	192
	30-34	**41**	**31**	**25**	11	2	110
	35-39	25	20	8	4	2	59
	40-44	12	2	2	2		18
	45-49	2	1				3
	Total	234	183	132	93	37	679
1850	15-19	35	28	25	23	17	128
	20-24	**136**	**113**	**93**	80	61	483
	25-29	**89**	**67**	**67**	53	12	288
	30-34	**33**	**26**	**20**	3		82
	35-39	19	16	5	3	2	45
	40-44	14	5	1			20
	45-49	3					3
	Total	329	255	211	162	92	1049
1864	15-19	28	23	20	16	9	96
	20-24	**135**	**118**	**93**	68	8	422
	25-29	**101**	**82**	**68**	24		275
	30-34	35	26	12	7		80
	35-39	16	9	4	1		30
	40-44	1	2	1			4
	45-49	2					2
	Total	318	260	198	116	17	909
Grand total		**881**	**698**	**541**	**371**	**146**	**2637**

high or too low will be discussed later). I have therefore combined the percentile suggestion with a procedure which is less arbitrary, based on the following reasoning.

In a population in which some couples practice contraception and others do not, the contraception-using part of the population pushes down the overall parity progression ratios (PPR) starting from some parity $i < k$. The contraception-using part will never reach parity k, so starting from that parity, the PPRs will only be affected by the part of the population not practicing contraception. This explains why PPRs usually show a sudden increase after their initial downward course with increasing parity. I have used this observation to determine k in combination with the percentile-80 rule of thumb suggested by David et al. (1988) because the upward turn after the initial downward trend in the PPR curve is not always

present, not even in the case of contraceptive practice: in each target cohort (*a*, *d*), I looked for the highest parity for which the subsequent PPR was higher than the current one. As long as that parity was not higher than percentile 80, I assigned that value to *k*. Otherwise, I simply took the value closest to the 80th percentile.

THE PROPORTION OF COUPLES PRACTICING CONTRACEPTION

In order to compare the extensiveness of fertility control in different cohorts, we will start by looking at the percentages of marriages practicing contraception row-by-row in Table 2. Note that upper and lower bound estimates are very close to each other.

A first, striking observation is that the highest percentages are *not* found among those marrying at the youngest ages but rather among women married between ages 25 and 30. This observation holds at each marriage duration and in each cohort, both for the lower and upper bound estimates. For example, in C1850, among women married between ages 25 and 30, about 27% had practiced contraception after 10 years of marriage, while this was just over 12% among those marrying at a younger age, according to the lower bound estimates. In C1864, the respective percentages were 56% among those marrying between ages 25 and 30 and 29% among those marrying earlier (again, according to lower bound estimates).

The extensiveness of fertility control clearly increased from the older to the younger target cohort. Between the 1850 and the 1864 cohorts, the percentage of contraceptive marriages increased by between 10 and 30 percentage points according to CPA estimates, depending on age at marriage and marriage duration. (The only exception is the limited group of marriages contracted by women after age 30 and still present in the sample after 15 years of marriage). The increase was greatest, relatively speaking, among the youngest brides, but the extent of control was highest, in absolute levels, among women married between ages 25 and 30: in this group, after 10 years of marriage, between 27 and 29% had ever used contraception within marriage in the 1850 cohort. In the 1864 cohort, these percentages were already around twice as high (56 to 62%).

Table 2: CPA estimates of the percentage of marriages practicing contraception (upper panels) and mean number of births to couples practicing contraception (lower panels), by cohort, woman's age at marriage, and marriage duration

		Marriage duration					
		Lower bound			*Upper bound*		
Cohort	Age at marriage	5	10	15	5	10	15
Extensiveness		*% marriages using contraception*			*% marriages using contraception*		
1850	20-24	7.4	12.5	6.0	7.4	12.7	6.1
	25-29	33.3	26.8	33.1	35.8	28.9	35.3
	30-34	12.1	4.5	14.8	14.3	5.9	14.8
1864	20-24	20.3	29.4	35.5	21.4	33.0	44.4
	25-29	40.9	56.3	61.4	45.4	62.3	69.8
	30-34	23.3	15.5	14.8	25.5	15.5	14.8
Intensity		*Mean number of births*			*Mean number of births*		
1850	20-24	0.02	0.47	0.25	0.02	0.47	0.26
	25-29	0.95	1.30	1.29	0.98	1.30	1.35
	30-34	0.75	0.97	0.00	0.89	1.22	0.00
1864	20-24	0.96	2.09	3.19	0.98	2.12	3.38
	25-29	1.35	1.89	2.38	1.45	2.00	2.55
	30-34	0.44	0.00	0.00	0.45	0.00	0.00

Looking at these estimates by marriage duration, the percentages are harder to interpret. We would expect them to increase with marriage duration in each cohort, as the percentage of couples who have *ever* used contraception can only increase, not decrease, within a given cohort, but this is not always the case. Only differential mortality, migration, and divorce can explain this. All women observed after 15 years of marriage are also observed, given our sample design, after 5 and 10 years of marriage, but the reverse is not the case; there are many marriages observed for 5 or 10 years but no longer observed after 15 years because one of the partners died, because they migrated away from Leuven or (less commonly) because the partners divorced. Marriage dissolution and out-migration may explain why the proportion of couples who have ever practiced contraception is sometimes lower for longer marriage durations than for shorter marriage duration. This implies that couples practicing contraception apparently had a higher chance of dropping out of the sample due to these factors (notably due to out-migration) than couples not practicing contraception. One interpretation is that family size limitation and geographic mobility were positively correlated, with the causal arrow potentially pointing in both directions.

At any event, the percentages estimated by marriage duration displayed in Table 2 strongly suggest that marital fertility control had already been

initiated in the first years of marriage by many couples, and hence at low parity, perhaps starting already after the first birth. Among women who married between the ages of 25 and 30, about a third in C1850 and more than 4 out of 10 in C1864 had already practiced birth control during the first 5 years of marriage. In the latter cohort, the percentage was increasing with marriage duration up to a point where the majority had practiced birth control.

THE INTENSITY OF FERTILITY LIMITATION

The expected number of births within marriages practicing contraception is an indicator of the intensity of fertility limitation. Strikingly, the mean numbers of births reported in the two lower panels of Table 2 are very low, suggesting very intensive birth control, especially among those who practiced contraception in c1850. Women from this cohort who married between the ages of 20 and 30 would have had even less than one birth, on average, after 5 years of marriage, and less than 1.5 births after 10 years. These averages are so low that they should provoke skepticism.

Table 3: CPA estimates of the proportion of marriages practicing contraception by women's age at marriage, marital duration, cohort, and parity attained

Marriage duration:		**5**				**10**				**15**			
Cohort:		1850		1864		1850		1864		1850		1864	
Age at marriage	Parity	C_L	C_U	C_L	C_U	C_L	C_U	C_L	C_U	C_L	C_U	C_L	C_U
20-24	0	7.21	7.21	5.76	6.16	8.43	8.49	4.57	4.98	4.50	4.53	2.31	3.17
	1	0.18	0.18	9.19	9.81	2.37	2.45	4.58	5.60	1.54	1.54	2.57	4.18
%	2			5.39	5.39	1.73	1.73	7.65	8.78			4.45	7.29
	3						7.93	8.97			10.81	11.71	
	4							4.70	4.70			6.51	8.24
	5											3.00	4.00
	6											5.79	5.79
25-29	0	14.99	16.28	3.99	6.54	11.08	12.15	2.70	6.27	11.07	12.94	1.23	6.50
	1	3.89	5.18	14.60	16.59	5.81	6.04	15.46	16.32	8.96	8.96	13.24	13.24
	2	14.37	14.37	22.26	22.26	2.78	3.13	20.84	21.66	5.59	5.80	17.44	18.34
%	3					4.48	4.98	13.51	14.23	5.52	5.64	15.15	16.10
	4					2.63	2.63	3.77	3.77	1.99	1.99	8.82	10.06
	5											5.57	5.57
30-34	0	1.34	3.55	17.31	18.70	0.64	1.82	15.54	15.54	14.77	14.77	14.77	14.77
	1	10.76	10.76	1.58	2.34	2.20	2.43						
%	2			4.42	4.42	1.62	1.62						
	3												

One potential explanation for the low averages could be a high and increasing level of sterility, compared to the model cohort, which CPA will automatically interpret as increasing voluntary childlessness (based on the first CPA assumption). As can be seen in Table 3, the percentages of marriages estimated to have not produced any children at all are indeed very high.

There may be a concern that the percentages of couples practicing contraception without any children are seriously overestimated here and, hence, that the extensiveness and intensity of birth control suggested by Table 2 may also be exaggerated. Before carrying on with the interpretation of these results, I have therefore re-estimated the CPA parameters, but this time limiting the population to marriages that had at least one child (both in the model and target cohorts). Table 4 displays the results of that exercise.

It turns out that limiting the sample to fertile marriages makes hardly any difference to the conclusions to be drawn. The estimated percentages of couples practicing contraception at any point shown in Table 4 (only fertile marriages) hardly differ from the percentages shown in Table 2 (all marriages) in c1864. The conclusions drawn from Table 2 can also be drawn from Table 4 and, if anything, the increase in the proportion of couples using contraception is even stronger in the latter table. The main conclusion, namely that contraception was most prevalent if the woman was aged between 25 and 30 at the time of marriage, also holds after carrying out the analysis which excludes marriages without any children.

All results presented so far indicate that the intensity of fertility control was weakening over time. As more and more married couples practiced fertility limitation, the mean number of births among couples using contraception increased. The only exception is the group of marriages observed after 10 years in which the wife married between the ages of 25 and 30, but after 15 years of marriage, the declining intensity of birth control is also visible in this cohort (Table 4): non-sterile but contraceptive couples of c1850 had on average 2.02 births after 15 years, while this was considerably higher in c1864, namely 2.60. Among those marrying at a younger age, the decline of the intensity of birth limitation is even more striking. In the latter group, after 15 years of marriage, the lower bound estimate of the mean number of observed births among non-sterile couples practicing contraception increased to 3.44 in c1864, up from just one birth in c1850.

Table 4: CPA estimates of the percentage of marriages practicing contraception (upper panels) and mean number of births to couples practicing contraception (lower panels), by cohort, woman's age at marriage, and marriage duration; only marriages with at least one birth

		Marriage duration					
		Lower bound			Upper bound		
Cohort	Age at marriage	5	10	15	5	10	15
Extensiveness		*% contraceptive marriage*			*% contraceptive marriage*		
1850	20-24	0.2	4.5	1.6	0.2	4.6	1.6
	25-29	22.9	18.8	26.9	24.5	20.1	27.3
	30-34	13.2	5.0	0.0	13.2	5.3	0.0
1864	20-24	15.9	26.4	34.6	16.6	29.8	43.1
	25-29	40.9	58.6	66.0	43.1	61.2	69.4
	30-34	8.7	0.0	0.0	9.8	0.0	0.0
Intensity		*Mean number of births*			*Mean number of births*		
G1850	20-24	1.00	1.41	1.00	1.00	1.42	1.00
	25-29	1.74	2.25	2.02	1.79	2.25	2.03
	30-34	1.00	1.40		1.00	1.43	
G1864	20-24	1.35	2.46	3.44	1.37	2.51	3.61
	25-29	1.57	2.10	2.60	1.60	2.10	2.63
	30-34	1.65			1.74		

Note: an empty cell means that CPA indicates that there was no couple practicing contraception observed with at least one child at the specified marriage duration

Another way to identify the weakening intensity is to look at cutoff parity *k*. As implied by the numbers in Table 3, the cutoff *k* had to be taken higher in C1864 than in C1850 in almost all groups. This means that PPRS, after they initially decline with increasing parity, start to increase only at a higher parity in C1864 compared to C1850. In other words, in the younger generation, couples practicing contraception often attained higher parities than did couples practicing contraception in the older generation. Since this is a very consistent and robust observation, we assume, at least for the time being, that it hints at a real phenomenon and is not some statistical artefact.

VIOLATIONS OF CPA ASSUMPTIONS

The estimates presented so far are unbiased provided that all three CPA assumptions are true. However, it is unlikely that they are all completely true, so it is important to be aware of the implications of these assumptions being violated. This section will investigate this issue in order of increasing

importance: I start with the least consequential assumption and end with the most important one.

THE INDEPENDENCE ASSUMPTION

The independence assumption holds that there is no difference in fecundity between couples who intend to practice contraception after reaching parity *i* and couples who have no such intention. The assumption is conditional: there should be no difference between the two groups, *on the condition* that both would reach parity *i*. The assumption does not go so far as to imply that there is no difference in fecundity between couples practicing contraception and couples not doing so, as a general rule. It is quite probable that high-fecundity couples are more likely to practice contraception because they reach a given parity more quickly than couples that experience difficulties with conceiving a child. This does not represent a violation of the assumption. A violation could arise if there was a correlation between the level of fecundity and that of desired fertility or ideal family size, because then there would be a difference between the intention to practice contraception between the high-fecundity and low-fecundity couples, given that both reached the same parity (David et al., 1988).

As suggested by Okun (1994), one can envisage two scenarios that would imply a violation of this assumption. In both cases, people adapt their fertility desires to their experienced fecundity. First, couples with high libido and high fecundability will naturally have shorter birth intervals, all else being equal. Experiencing short birth intervals may encourage such couples to initiate their contraceptive effort at a low parity. Low-fecundability couples who experienced long birth intervals may not have that intention at the same low parity. Second, couples with high fecundity may, in contrast, feel that the efforts needed to apply contraception (for example by practicing coitus interruptus) are too high, so that they decide not to try it even after reaching parity *i*, while low-fecundity couples may find that it costs them less effort and therefore proceed with it.

A simulation study shows that both scenarios lead to an underestimation of the true proportion of couples practicing contraception (Okun, 1994). Violation of the independence assumption will never lead to an *over*estimation of the extensiveness of fertility control. This is implied by the probability structure used to obtain the CPA estimates (see equation (9) in David et al. 1988), and confirmed by Okun's simulations.

The second CPA assumption holds that it is possible to determine for each cohort a parity *k* that will never be reached by any marriage effectively practicing contraception from that cohort. One could, of course, take a very high value of *k* to be on the safe side. However, this comes at a price: the interval between lower and upper bound estimates will be much wider, so the conclusion drawn will not be precise in that case. David et al. (1988) have already pointed out that choosing a value of *k* which is too high will increase the uncertainty about the actual proportion of couples practicing contraception.

518 But what happens when a too-low value of *k* is chosen, so that some contraceptive couples still have *k* or more children? It is easy to see that this will always lead to an underestimation of the extensiveness of fertility control, because CPA assumes, by the very definition of *k*, that all couples reaching parity *k* have never practiced contraception. For this reason, the CPA estimates may be considered conservative ones.

Yet, as pointed out by Okun (1994), this also undermines the power of CPA to distinguish between the extensiveness and the intensity of fertility control. It is again easy to see why this is the case: if a too-low value of *k* is taken, CPA will assume that none of the couples practicing contraception had *k* or more children, so the mean number of children among couples practicing contraception will be underestimated, and hence the intensity of control will be overestimated.

This may explain the very high intensity estimated for the C1850 members who married at the youngest ages, particularly as observed after 10 years of marriage. The rules I applied to determine *k* implied it to be set at 3 after a marriage duration of 10 years for this cohort. It is quite likely that an unknown proportion of couples practicing contraception effectively had more than two children after ten years of marriage. (Obviously, the optimal value of *k* also depends on the efficiency of the contraceptive techniques applied.) As a result, our CPA estimates for the 1850 cohort are likely to be too low for the extensiveness of control (the true proportion of couples controlling their fertility will most likely be higher) but too high for the intensity (the mean number of births among couples practicing contraception will most likely be higher than estimated).

The first and most important assumption underlying CPA is that the only difference between model and target populations with respect to the proximate determinants of fertility is that the latter may practice birth control while in the former birth control is absent. If there are any other differences in the proximate determinants of fertility (Bongaarts & Potter 1983), CPA estimates will be biased. In practice, it is best to assume that some bias will always be present. The question is: how large is this bias, and does it undermine the drawing of valid and informative conclusions?

To measure the extent of bias, it is useful to distinguish two sub-assumptions here. Sub-assumption (a) is that no birth control is practiced in the model cohort, since all fertility differences with the target cohort will be attributed to birth control. Sub-assumption (b) is that the target cohort would have experienced the same fertility if birth control were absent there, too. Below, I discuss the violations of these sub-assumptions.

a. Birth control in the model population

Obviously, the more birth control is practiced in the model population, the more the practice of birth control will be underestimated in the target cohort (Okun, Trussell & Vaughan, 1996). In this sense, CPA measures of the extent and intensity of fertility control are conservative ones, which is not a bad thing for most purposes. Suppose that, in the case of the Leuven application, 5% of women married between ages 20 and 25 practiced birth control after 10 years of marriage in the 1830 cohort (which features as the model cohort). This would clearly be a violation of the first CPA assumption. Our lower bound estimate indicates that about 27% of the women in equivalent marriages from the 1850 cohort practiced birth control (see 26.8% in Table 2). CPA derives this percentage from differences in the parity distribution between this target cohort and the 1830 model cohort. If 5% practiced effective birth control in the model cohort, then 27% is clearly an underestimation of the true proportion of couples practicing. The true percentage will perhaps be closer to 32% – one cannot just add the percentages up; things are more complicated and depend on the intensity of fertility control of the 5% in the model cohort.

While an estimate of 27% underestimates in this case the true proportion practicing contraception, as a measure of *change*, the percentage is an *over*estimation. In this hypothetical example, the growth in the extent of birth control would not be +27 percentage points but rather 27 – 5 = +22 percentage points.

All in all, it turns out that one should not worry too much about this sub-assumption (and I would argue that it would be better always to expect birth control to be present in any population, see Van Bavel, 2004): if this sub-assumption only is violated, we underestimate the true proportion practicing contraception, and the change in percentage points compared to the model cohort is overestimated. In practice, however, historical demographers are usually more interested in the direction of change rather than in the exact number of percentage points.

b. Differences in the proximate determinants of natural fertility

Violation of the second sub-assumption has rather serious and inconvenient implications since it can lead to unknown bias in all directions. The
520 sub-assumption is that the target cohort would have had the same fertility if no fertility control had been exercised. If there is no fertility control, differences in fertility can only be due to one of the other proximate determinants of fertility: natural sterility, effective fecundability (the monthly probability of conceiving a child leading to a live birth, which takes into account intra-uterine mortality), and postpartum amenorrhea (Bongaarts & Potter, 1983). Okun (1994) pointed out that there is yet another factor that affects the CPA estimates in this context: the prevalence of pre-nuptial conceptions. I will now discuss each of these factors.

1. Natural sterility refers to the extent to which some couples do not experience any live births without practicing contraception. If this occurs more often in the model than in the target population, then CPA will underestimate the extent of control. Conversely, if there is more unwanted childlessness in the target cohort than in the model cohort, the extent of control will be overestimated, since the excess of childless couples will be counted as practicing contraception. This was the reason why I limited the analysis to couples with at least one child in Table 4 – which did not substantially alter any of the conclusions.
2. The effective fecundability, the monthly probability of conceiving a child leading to a live birth, may vary depending on factors that have nothing to do with birth control, including the wife's age, intra-uterine mortality and coital frequency. If fecundability is lower in the target than in the model cohort for reasons unrelated to birth control, CPA will still attribute the resulting negative effect on fertility to birth control.

   In her simulation study, Okun (1994) showed that the extent of the bias induced by uncontrolled differences in fecundability between

model and target cohorts are inversely correlated with the true proportion of marriages applying fertility control. When the actual proportion of contraceptive couples is low (say around 10%) and there is a decline of fecundability unrelated to fertility control, then the overestimation of the extent of fertility control will be higher compared to the equivalent situation when the true proportion of controlling couples is high (say 50%). As a result, CPA is unable to correctly report an absence or stability of fertility control when there are changes in fecundability for reasons other than fertility control.

3. A similar conclusion can be drawn regarding the impact of postpartum amenorrhea. Demographers use this term to refer to a woman's period of temporary infertility after childbirth, lasting until the resumption of ovulation. An important behavioral determinant of the length of this period is breastfeeding: long and intensive breastfeeding leads to longer postpartum amenorrhea (Wood, 1994) and hence to longer interbirth intervals and lower fertility. While breastfeeding practices could be a part of fertility controlling strategies, this need not always and not necessarily be the case. However, CPA will automatically attribute the resulting lower fertility level to fertility control. Conversely, when fertility increases because breastfeeding is on the decline in the target cohort compared to the model cohort for reasons that have nothing to do with (a decline of) fertility control, CPA will treat this as an indication of less fertility control and will therefore underestimate the true extent of control (Okun, 1994).

The crucial question, both with respect to amenorrhea and with respect to fecundability, is whether changes are the result of birth control or not, since both proximate determinants are factors that may potentially be used to deliberately affect fertility. One may surmise that, in Leuven in the second half of the nineteenth century, infecundity (or natural sterility) was on the decline, fecundability was moving up, and the period of postpartum amenorrhea shortening, but for reasons unrelated to fertility control. One reason is that the hygienic conditions were improving in Leuven at this time, particularly following the final cholera epidemic in 1866 (Matthijs, Van Bavel & Van de Velde, 1997). Another reason is that the younger generations were better nourished, as there was less scarcity and fewer crisis years hit the Leuven food markets (Van Bavel, 2001). Mortality, including infant mortality, was on the decline (Matthijs, Van Bavel & Van de Velde, 1997). With regard to postpartum amenorrhea, there are indications that breastfeeding practices

were on the decline in nineteenth-century Flanders and Brabant (Vandenbroeke, Van Poppel & Van der Woude, 1983). If that was true in Leuven, it would have led to fertility increases, unrelated to (weakening) birth control practices, which would imply that CPA underestimates birth control.

4. The implications of differences in the prevalence of pre-nuptial conceptions are comparable with the implications of differential fecundability. When there are more pregnant brides at the wedding date in the model cohort than the target cohort, the number of births at a given marriage duration will be higher in the former cohort, all else being equal. CPA will attribute the lower fertility in the target cohort to fertility control, which need not be the case. Conversely, if there are more prenuptial conceptions in the target cohort, CPA will underestimate the number of marriages practicing contraception (Okun, 1994).

Here, the Leuven data displayed in Table 5 indicate that there is a problem because the proportion of marriages with pre-nuptial conception tends to be higher in the younger target cohorts than in the older model cohort. This was particularly the case among those marrying at the youngest age in the 1850 cohort.

Table 5: Percentage of marriages that had a pre-nuptial (effective) conception, by woman's age at marriage and cohort

Woman's age at marriage	Percentage of marriages with a pre-nuptial conception			Total number of marriages		
	C1830	C1850	C1864	C1830	C1850	C1864
20-24	36.7	46.3	41.3	90	149	143
25-29	31.4	34.5	39.2	70	87	97
30-34	28.9	37.5	14.8	38	32	27

This raises questions about the conclusion drawn earlier, namely that fertility control was first and most frequently found among those marrying between the ages of 25 and 30, as the CPA estimates of the proportion of couples controlling their fertility are most likely too low for those who married at a younger age, leading to with the exaggeration of the differences between this group and those marrying later.

Assuming that the effect of prenuptial pregnancy on total marital fertility has largely disappeared after 10 years of marriage, we may put more trust in the estimates at higher marriage duration (even though selective sample attrition could undermine the estimates at higher marriage duration). In Tables 2 and 4, one can indeed perceive some kind of catching-

up in the extent of fertility control among those marrying at the youngest ages after 10 years of marriage.

In the 1864 cohort, the difference with the model generation is greatest among women marrying at a later age. The trends run in two different directions: among those marrying between ages 25 and 30 years, pre-nuptiality is 8 percentage points higher in the youngest than in the oldest cohort while among the smaller group marrying between ages 30 and 35 years, pre-nuptiality is 14 percentage lower (rather than higher) in the youngest cohort. This suggests that CPA may seriously underestimate and overestimate, respectively, the extent of birth control in the youngest target cohort, depending on age-at-marriage group.

CONCLUSIONS AND DISCUSSION

In contrast to alternative methods of measuring fertility control in historical populations, where we cannot ask men and women about their contraceptive behavior, CPA offers intuitive estimates of the percentage of couples practicing contraception and the intensity of their fertility control. This is a great advantage when the aim is to provide "the story behind the tables" and to build bridges between historical demographic research and the general public. Yet, as usual, the elegance of the results comes at the price of accepting assumptions which are unlikely to be completely true in reality. After presenting and applying CPA, I have therefore taken the time to discuss the implications of violating the assumptions made. I will present the discussion of the results in three main conclusions.

First, the prevalence of birth control is *not* highest among those marrying at the youngest ages but rather among women married between the ages of 25 and 30. This runs against the theory that the decline of the age at marriage (with the weakening of the Malthusian marriage pattern) was the trend encouraging couples who were marrying at an ever younger age to practice birth control. Rather, it suggests that marriage postponement and marital fertility control were two complementary parts of overarching fertility control strategies. Knodel (1988, p. 343-346) made a similar comment in his study of German villages (using a technique which can be considered a precursor of CPA). David (1988) also drew a similar conclusion in their studies of the Irish urban population in 1911 and the white population of the southern USA in 1910. David et al. (1988, p. 178) argued "that among the urban Irish in the first decade of the 20th century, deferred mar-

riage was not a substitute for fertility control but, rather, a complement to it".

This is also consistent with the thesis put forward by Szreter (1996; Szreter & Garrett, 2000), namely that postponement of marriage and marital fertility control should not be treated separately from each other as two alternative strategies but rather fit together in a comprehensive fertility control strategy. This interpretation runs against approaches that do not consider marriage postponement as part of deliberate, volitional fertility control but rather see it as part of latent circumstances that keep fertility below the maximum without the explicit aim of limiting fertility (e.g. Coale, 1986). Scholars following the latter approach have also observed a positive correlation between a high age at marriage and fertility control within marriage, but they have interpreted this correlation differently. Coale (1992, p. 335) writes, for example:

"The decline in marital fertility occurred earlier in late-marrying populations, not (we believe) because late marriage itself promotes the adoption of birth control, but because the long-established social conditions that accounted for the tradition of late marriage in western Europe also were favorable for the early adoption of deliberate limitation of childbearing"

In Coale's view, the factor connecting late marriage with fertility control after marriage is the greater autonomy of late-marrying people vis-à-vis their families of orientation. Late-marrying women and men are also more autonomous in terms of partner choice, and this autonomy facilitates the adoption of birth control within marriage. As shown in a comparative study by Engelen & Puschmann (2011), in the Arab world, the postponement of marriage and the diffusion of fertility control within marriage in the twentieth century went hand in hand, producing a much faster transition to low fertility than in the past of western Europe. The latter region had a tradition of late marriage (and therefore only moderate pre-transition fertility) but the decline of fertility resulting from the diffusion of marital fertility control was slowed by increasing nuptiality.

Coale's interpretation of the connection between late marriage and marital fertility control may sound plausible when comparing different national populations, perhaps from different continents and different regions of the world, but can hardly make sense of the internal correlation within each of the Leuven cohorts, as observed in Table 2. On the contrary, we know that generally it was the bourgeois elite which was marrying at the latest ages while the laboring classes were marrying younger. If anything, women and men from this bourgeois elite experienced fewer rather than

more degrees of freedom in their choice of marriage partner, compared to the working classes (Bozon, 1991; De Singly, 1987; Goode, 1970). The observation that the proportion of couples practicing contraception is highest among marriages concluded when the bride was in her late twenties suggests some correlation with social class. Indeed, Van Bavel (2002) found that bourgeois daughters were pioneering fertility control within marriage.

Still, the observation remains that, at the macro-level, the decline of marital fertility often occurred in times when the Malthusian marriage pattern was weakening and nuptiality was on the rise (see, e.g., Engelen & Hillebrand, 1986). If the micro-level CPA results for Leuven are true and can be generalized, a question for future research is how to reconcile the macro-level association between rising nuptiality and the limitation of marital fertility with these micro-level findings.

Proceeding to the second major conclusion: even in the 1850 cohort, a sizeable proportion of couples were limiting marital fertility. Fertility control was already perceptible during the first years of marriage and at low parities. It was not limited to "stopping" at higher parities and after many years of marriage. This suggests that spacing also played an important role in birth control, not just stopping. Such behavior would not be detected as birth control with Coale & Trussell's (1978) M&m approach (Van Bavel, 2004).

Third, CPA suggests that the growing prevalence of fertility limitation went hand in hand with a decline of the intensity of birth control. This may be true, but it could also be an artefact of CPA.

It could be true: as more and more couples tried to limit their fertility, the mean number of births among those practicing any contraception was increasing. There are several possible explanations. In principle, it could be that the efficiency of contraceptive (or abortive) techniques as such worsened, but this is not very plausible. More plausible is a composition effect: as more and more couples practiced contraception, a growing proportion of the group practicing contraception was not very experienced with it and was less able to apply techniques consistently and effectively all the time. In other words: a growing proportion were just beginners at contraception, having perhaps not learned about it from their parents' generation. Another, potentially supplementary explanation is that the mean number of desired births increased in the younger cohort of couples practicing contraception. Again, this could be seen as a compositional effect of the growing group of couples trying contraception. Perhaps parts of the population suffering high infant and child mortality started to prac-

tice contraception in the younger generation. If parents wanted to have at least a certain number of surviving children, such higher mortality would imply a higher mean number of births.

But the weakening intensity of birth control could also be an artefact of the CPA approach. The conclusion of declining intensity was based primarily on the group marrying at a young age. My guess is that this conclusion is wrong because the value of *k* was chosen too low, as discussed in the section on the violation of the CPA assumptions. Yet, recalculating the estimates with a higher value of *k* was not advisable because this would lead to the violation of other assumptions (see note 13 in David et al., 1988). CPA represents a valuable addition to the toolkit of historical demographers, but one to be used with at least as much caution as the other tools.

In the case of its application to Leuven in this paper, I would assume that, all in all, all direct determinants of natural fertility were evolving in directions implying rather higher fertility, suggesting that CPA may systematically underestimate the diffusion of fertility control at the end of the nineteenth century.

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MARLOES HÜLSKEN

Opting for children?

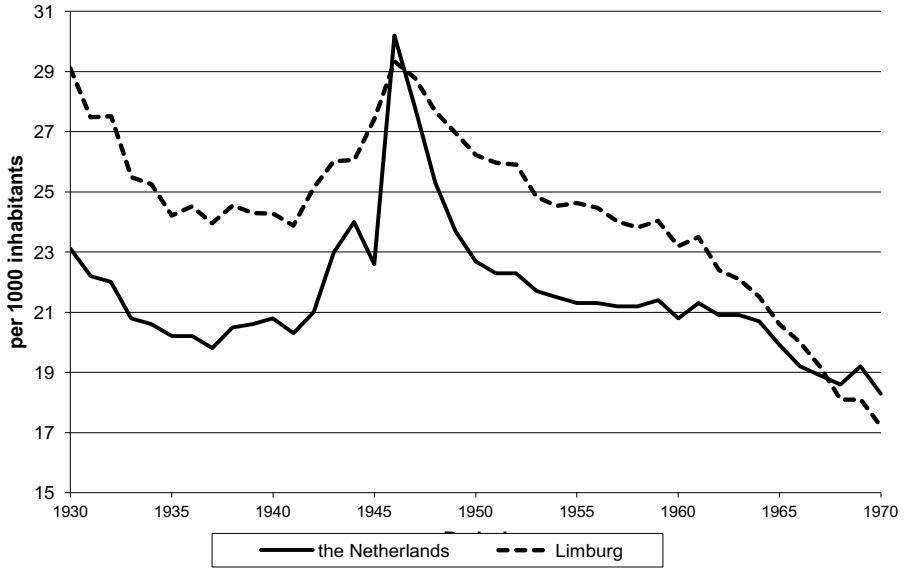
Women's magazines and their readers on Catholic marital life in the Netherlands, 1950-1975[1]

INTRODUCTION

Large Catholic families are a vivid stereotypical image in Dutch society, which during the first half of the twentieth century was highly pillarized along religious lines. Stories abound regarding the different ways in which the church tried to influence family size. Parish priests would visit families in their homes urging them to conceive many children and inquiring about why the next child, in their opinion, was delayed. Motherhood and large families were glorified in Catholic media. Photographs in women's magazines showed families with up to fifteen or sixteen children. 'The more children the better' seems to have been the message preached not only to, but also by, Catholics. All this seemed to change radically during the second half of the twentieth century. The large Catholic family disappeared. From the 1970s onward, Catholic family size no longer differed much from the average family size found for other religious groups.

From the 1950s onwards, questions regarding the causes of change in fertility levels of Catholics increasingly became the subject of research and discussion. Theo Engelen, born and raised in the Catholic south of the Netherlands, contributed much to the scientific debates on Catholic fertility rates (Engelen, 1986; 2009). Although Theo himself loved to analyze fertility rates on a quantitative aggregated level, he inspired and motivated me to conduct a qualitative research into the cultural, religious and social dimensions of fertility and motherhood. I owe him many thanks for inspiring and supervising my thesis on opinions of motherhood and birth control among women's magazines and their readers (Hülsken, 2010). This article is based on my thesis and aims to offer a contribution to the scientific debate about the history of Catholic marital life and the decline in

Graph 1: Development in birth rates in the Netherlands and Limburg, 1930-1970



Based on: Engelen (2009, p. 58 & 66)

fertility by analyzing how women's magazines wrote about motherhood, family size, birth planning and sexual morality, and by examining whether, and if so how, these magazines influenced their Catholic female readers.

I have had two research goals. First, I have tried to answer the question of how the women's magazines *Beatrijs* (Beatrice), *Libelle* ('Dragonfly'), *Margriet* (Marguerite/'Daisy'), and the magazine of the Catholic Women's Corporation (KVG), *Doorkijk* ('Through-view') wrote about motherhood, family size, birth control, and sexual morality during the period 1950-1975. Which developments can be observed in the way these magazines wrote about the aforementioned topics?

Secondly, by conducting qualitative interviews with twenty-five Catholic female readers, this study offers an analysis of the meaning attributed to women's magazines by their female readers during the period 1950-1975. To what extent did the content of the magazines influence their readers? And were readers influenced in their attitudes and behavior concerning motherhood and fertility by the magazines, and if so, how did this process of influencing work? I examined how twenty-five women dealt with motherhood, family size, birth control and Catholic rules and morality. Which factors were of importance in the lives of women concerning decisions on family size and birth control? And what role did women's magazines play in this process?

This article should be considered in the light of the scientific debate about Dutch religious pillarization and de-pillarization. Following Engelen (1997), Luykx (2000), Derks (2007) and Westhoff (1996), I regard the process of pillarization during the twentieth century as less successful and less all-inclusive than has previously been argued. Consequently, the 1960s should also be seen as less revolutionary. As early as the 1930s there were many 'other Catholics'. The term 'other Catholics' denotes Catholics whose behavior deviated from official Catholic norms and values and who were critical of the church's guidelines (Luykx, 2000). A significant gap existed between official church doctrines and the behavior of the church's members concerning birth control. From the 1930s onward, Catholics began to use birth control on a large scale (usually in the form of periodical abstinence) contrary to the official church rules (Westhoff, 1986). After the introduction of the birth control pill ('the pill') in the early 1960s, many Catholics used this form of contraception as well, even though the Holy See prohibited use of the pill.

Priests, physicians, psychologists, psychiatrists and other professionals interfered actively with the intimate marital lives of Catholic believers. Two processes could be observed for the period 1950-1975. On the one hand, a process of emancipation took place from within the Catholic pillar, in the sense that physicians, psychologists, psychiatrists, and even some priests freed themselves from clerical strictures and rules. Increasingly, they drifted away from the Church as an institution and followed their own paths. On the other hand, a process of secularization took place in which the active role of professionals was increasingly restricted and Catholics acted more according to their own moral values (Westhoff, 1996; Derks & Dols, 2010). Within different Catholic women's organizations, such as the KVG, the same sort of emancipation process was observed (Hulsken, 2010).

From several surveys (partly initiated and implemented by the publishers of *Libelle* and *Margriet*) held during the period 1950-1975, it appeared that there were indeed differences between Catholics and 'other' Dutch men and women in the area of fertility and contraception (Depuis & Noordhof, 1969; Seksualiteit in Nederland, 1969). Catholics did make use of birth control, but in comparison to other Dutch groups they were more often in favor of 'natural' birth control (periodical abstinence rather than condoms or the pill). So whereas most Catholics made use of birth control, they nevertheless differed from non-Catholics in their attitudes toward it.

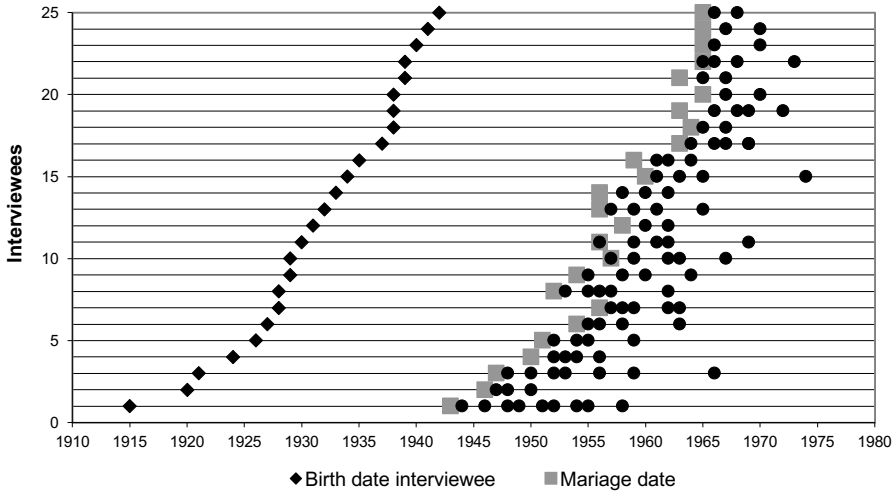
As previously stated, this article is based on an analysis of the content of four different women's magazines: the commercial *Libelle*, *Margriet* and *Beatrijs*, and the magazine of the Catholic Women's Corporation, *Doorkijk*. In the literature on (women's) magazines, two viewpoints persist. On the one hand, feminist theory argues that commercial women's magazines have a negative impact on women and enforce traditional role patterns on their readers (Wassenaar, 1975). On the other hand, magazines are seen as a driving force behind the emergence of new ideas and social and cultural changes (Aerts, 1996). Both theories on magazines are mostly based on research on their content and the different ways in which magazines were put together. In this study, both theories are examined by analyzing the content of the four magazines combined with an analysis of qualitative interviews with readers of these magazines.

The content of the magazines *Libelle*, *Margriet* and *Beatrijs* was analyzed for the following years: 1950, 1955, 1960, 1965, 1970 and 1975. In addition, a general evaluation was made for the issues published in the intervening years, in order to establish that no major changes occurred during those years. The content of the magazine *Doorkijk* was analyzed for the volumes from 1959 (first year of publication) up to 1975. I compared and analyzed all content related to the topics of motherhood, family size, birth control and sexual matters. For the analytical framework used see my thesis (Hülsken, 2010, p. 197-200).

The other part of this research is based on twenty-five qualitative in-depth interviews with Catholic women who had children in the period 1950-1975 (for details of the interviewees and the interview guide used, see Hülsken, 2010, p. 201-205).[2] The interviewees were selected and approached via adverts in women's magazines (12 women) and directly approached via acquaintances (13 women). The aim of the interviews was to reconstruct the intentions, opinions and behavioral patterns of the interviewees. I have tried to take the interviewees back in time by letting them read magazines and articles from the nineteen-fifties, sixties and seventies. Analytical tools and frameworks from social sciences were used to construct the interview guides and interviews. The interviews were analyzed with the help of 'repertoire analysis', an analytical instrument employed by Joke Hermes (1993).

The interviewed women were born between 1915 and 1942 and married between 1943 and 1965. The women all gave birth to children in the period

Graph 2: Interviewees' dates of birth, marriage, and birth of children



1950-1975 (see Graph 2). The social background of the women was mostly middle- or upper-class. Most women were from the southern provinces of Limburg and Noord-Brabant which were predominantly Catholic. There was a proportional division over city and country. All women considered themselves as Catholics during the period 1950-1975. Religion was a natural presence in their lives; they were born into Catholic families, went to church and Catholic schools, performed Catholic rituals in their homes such as praying before dinner, and celebrated Catholic holidays. Eleven of the interviewed women were actively involved for part of their lives in a Catholic women's corporation (mostly the KVG). Most women read more than one women's magazine at the same time. *Libelle* was read most often (by twenty women), *Margriet* came second (read by fifteen women), *Beatrijs* third (read by eleven women) and *Doorkijk* was the least read (by seven women).

WOMEN'S MAGAZINES ON CATHOLIC MARITAL LIFE

Margriet, *Libelle* and *Beatrijs* fitted within a tradition of women's magazines that had started in the eighteenth century. The magazines originated in the 1930s and developed into commercial successes. *Margriet* and *Libelle* achieved astoundingly large circulations during the 1960s and 1970s: up to 824,000 for *Margriet* and 575,000 for *Libelle* (Hemels & Vegt, 1997;

Hülsken, 2010). The Catholic *Beatrijs* remained smaller in size, with a circulation of 89,646 at its peak (Hemels & Vegt, 1997). The three magazines resembled one another with regard to content and appearance. Though *Beatrijs* had a Catholic perspective, this was hardly ever referred to explicitly. In 1967 this magazine silently merged into *Libelle*. The majority of Dutch women read either *Libelle* or *Margriet* or both, and this also applied to Catholic women. Research on *Libelle* and *Margriet* and their readers predominantly emerged from commercial initiatives (Hemels & Vegt, 1997). The publishers of *Libelle* and *Margriet* were very keen to know by whom the magazines were read and what the characteristics and attitudes of these readers were. By virtue of their high circulation, these magazines generated large sums of money from advertising. Thus, commercial motives played a dominant role in the origin, content and persistence of these magazines.

The magazine *Doorkijk*, published by the KVG, was a typical association magazine; a small edition, relatively low-priced, and non-commercial. From editorial archives, it appears that the magazine had difficulty in sustaining itself (Archief Katholieke Vrouwengilde, Aartsbisdom Utrecht, piece 79). *Doorkijk* thus had fewer readers, and making a profit was not the purpose of the KVG. Moreover, the magazine was explicitly Catholic and aimed at educating and emancipating Catholic women. With respect to edition, appearance, and character, the three commercial magazines differed strongly from *Doorkijk*.

The three women's magazines *Libelle*, *Margriet* and *Beatrijs* were initially not progressive in their views on birth control and contraception. In the 1950s the magazines were characterized by morality, domesticity and the cult of motherhood. Motherhood was perceived as a calling and a sacred obligation. Large families were the obvious choice for many women, were reported on with high regard by the magazines, and were never subject to debate. Sexual morality was defined by chastity and decency. Sexual intercourse was assumed to be restricted to married adults. (*Libelle*, 1950; 1955; *Margriet*, 1950; 1955; *Beatrijs* 1950; 1955)

From 1960 onward, a cautious openness could be observed. Women were increasingly seen as being more than just mothers, and it was held that they should also be able to develop themselves in other areas. Chastity and morality were still important, but the periodicals reported on it in a less moralizing tone. Birth control and contraception remained a taboo in the three magazines. When the pill was introduced in the Netherlands in 1962, it was not mentioned at all in the three women's magazines.

In the period 1965-1970, circumstances changed rapidly as many taboos disappeared. A process of secularization, democratization and encouraging more openness about sexuality took place in the Netherlands. The revolutionary sixties and seventies were also the times of the Sexual Revolution and the Second Feminist Wave. Media such as magazines, newspapers, and television and radio had a profound influence on this era (Cosetera Meijer, 1996; Righart, 1995). All three magazines wrote about the changing morality regarding sexuality and birth control. From 1968 onward, the pill received a lot of attention – both positive and negative – in *Libelle* and *Margriet*. The average Catholic family size had already changed substantially and the magazines wrote about new norms and values concerning sexuality. The magazines paid attention to a number of large-scale scientific surveys which were initiated by the magazines' publishers on taboo topics such as sexuality, secularization and birth control. The nature of the magazine articles about family size, birth control and sexual morality was scientific. Scientists and professionals were asked to give their opinions on diverse topics. For instance, the famous Dutch professor Trimbos wrote about the burden and joy of having children (*Beatrijs,* 1965 n. 52, pp. 68-72). Topics relating to large families had disappeared from the magazines (*Libelle* 1965; 1968; 1970; *Margriet* 1965; 1968; 1970; *Beatrijs* 1965; 1967).

By 1975, in *Libelle* and *Margriet* having children was being presented as a matter of personal choice rather than religious faith. *Margriet* in particular changed its content from the seventies onward. In the magazine's supplement 'Men and Women', controversial topics such as partner swapping, homosexuality and unfaithfulness were discussed (*Margriet*, 1970). Furthermore, in both magazines, attention was being paid to women's emancipation and the women's movement. The development in the content of the three magazines thus showed a clear and sudden change in the late 1960s, when topics such as birth control, sexuality and family planning were discussed and accepted openly.

Doorkijk, the magazine of the Catholic women's organization, differed strongly from *Beatrijs*, *Libelle* and *Margriet* in character and content. *Doorkijk* was non-commercial, small-scale, explicitly Catholic, and aimed to educate and emancipate Catholic women. Motherhood and family were topics discussed critically in *Doorkijk*. In the period 1959-1964 the magazine advocated large families as an ideal, though not necessarily one that every family needed to aim for. Birth control and family planning were topics a husband and wife could decide on together. In 1963 *Doorkijk* reported on the changing opinions on sexual morality and marital life.

Rapid developments started from 1965 onward. Birth control became the subject of open debate. The topic incited much confusion and discussion, all the more so because there was no official reaction from the church concerning these new developments in birth control. *Doorkijk* emphasized the role women needed to play in the debate on contraception. When the Holy See did produce an official reaction, *Humanae Vitae* in 1968, which prohibited all mechanical and chemical methods of birth control, the editorial board of *Doorkijk* was disappointed (*Doorkijk*, 1968, nb.1, p. 6-7). The magazine conducted a survey on birth control. It appeared that most participants supported the use of birth control methods and did not follow church guidelines (*Doorkijk*, November 1968 & February 1969). After the 1960s the topic of birth control and family planning lost the editors' interest. Sexual morality was mainly discussed in relation to the sexual education mothers should give their children. In sexual education the emphasis had to be on openness, honesty and a warm family life. Furthermore there was positive attention for the women's movement and women's changing position in society and within the church.

In the period 1971-1975, debates on abortion were published in *Doorkijk*. The overall opinion was that women had a right of self-determination with regard to their bodies. The differences in the character, aims, form and purpose of *Doorkijk* on the one hand and *Beatrijs*, *Libelle* and *Margriet* on the other hand led to big differences in the content of the magazines. The non-commercial and small scale *Doorkijk* wrote relatively early and in a progressive manner about changes in morality with respect to sexuality and birth control, whereas the commercial magazines *Beatrijs*, *Libelle* and *Margriet* were at first reserved about writing on these topics. Commercial motives played a dominant role in the content of *Libelle*, *Margriet* and *Beatrijs*. The magazines had large circulations and high advertisement revenues. Controversial topics were avoided in order to attract as many readers, and thereby advertisers, as possible. *Doorkijk* – a typical association magazine with a small circulation and no intention of making a profit – appeared to be more progressive in its writing. The significance that female readers assigned to the content of the four magazines will be discussed in the following paragraphs.

By conducting qualitative interviews with twenty-five Catholic female readers, this study offers an analysis on the significance attributed to women's magazines by their female readers during the period 1950-1975. To what extent did the content of the magazines influence their readers? And were readers influenced in their attitudes and behavior concerning motherhood and fertility by the magazines, and if so, how did this process of influencing operate?

I started with an analysis of how women's magazines gave meaning to the people interviewed. 'Giving meaning' is, in line with social scientist Joke Hermes, used in its broadest sense as the meaning that women attribute to women's magazines with respect to all aspects relating to women's world view and significance for their own lives (Hermes, 1993). In addition, I focused on what women actually remembered about the content of the magazines and whether they remembered how and if the magazines wrote about motherhood, family size and birth control. Finally, it was assessed to what extent and in what ways the women's magazines influenced readers' decision-making with regard to fertility and contraception.

The magazines were a genuine source of relaxation, and were even welcomed as friends by some women. Most of the women interviewed took recipes, sewing patterns or advice on raising children from these magazines. The repertoires of 'emotional learning and understanding' and 'easily put aside' that were distinguished by Hermes were applicable to these readers to a lesser extent (Hermes, 1993, p. 86-87, 254-255). An important repertoire that was not distinguished by Hermes, but appeared to be very applicable to the women in this study, is that of 'education and development'. The women's magazines were often mentioned because they propagated developments and modern ideas on child care and education, for example. This was especially true for women in the countryside. The contents of *Libelle*, *Margriet*, and *Beatrijs* were regarded by some as 'world news' and 'contact with the outside world'. The magazines brought information and ideas into their worlds which could be obtained by no other means. This outside world was non-Catholic. The magazine of the KVG, *Doorkijk*, was read to a lesser extent than other magazines. *Doorkijk* was not a source of entertainment, but was rather regarded as dull and as something that they felt obliged to read. Readers were not able to say much about this magazine.

As mentioned above, the content of the different commercial magazines was quite similar. It was difficult for readers to identify differences between the various magazines. They often had a preference for one particular magazine, but this was mostly not based on its content. In general, readers thought that the magazines' opinions on motherhood were in agreement with their own. Most readers remembered that in the 1950s and for a large part of the 1960s women's magazines did not discuss birth control and family planning. Since a large number of the women interviewed started their families during this period, decisions on birth control were hardly influenced at all by the content of women's magazines. Nevertheless, a few readers indicated that in the late 1960s and early 1970s their decision on taking the pill was also based on the information they were reading in *Libelle* and *Margriet*.

Women's magazines did directly influence readers, but this influence was mainly restricted to cooking, fashion, beauty, child rearing and home decoration. Information that was in conflict with the opinions and attitudes of the women interviewed was readily ignored. Women gave more meaning to the magazines they used to read in the period 1950-1975 than to the magazines they would read now. This is attributed to the relative lack of sources of information for women in that particular period.

Furthermore, it can be concluded that the particular value of women's magazines was not only determined by its content, but also by the simple fact that magazines for women existed and could be read. The process of reading and having a magazine of their own was important to women. The possibility of being able to sit down and enjoy a magazine, and by doing so invest in themselves, was regarded as an act of emancipation, since the activity of reading and relaxing conflicted with the ideal of the ever-available and caring housewife and mother (see also Radway, 1984). Indirectly, this may be linked to changes in attitudes towards birth control as emancipation in one particular field could fuel emancipation in other fields.

CATHOLIC WOMEN ON MARITAL LIFE: 'NOT AS MANY AS MY MOTHER'

How did the twenty-five women interviewed experience their motherhood, the size of their families and the use of birth control? How did women obtain information on birth control? And how were decisions about the number of children made? Which methods were used and how were these methods experienced? Did religion have any influence on the

decision-making process? The results of the interviews are compared with the study by the Dutch journalist Marga Kerklaan. Her book on Catholic marital life, based on three hundred letters written by Catholic women, has been very influential (1986). The general image that Marga Kerklaan invokes in her book is that of ignorant women who were repressed by both the church and their husbands. The 'Kerklaan women' gave birth to their children in the first half of the twentieth century (Kerklaan, 1986). The interviews in this study are conducted with women who married and gave birth between 1950-1975 (see Graph 2). Other differences are that the Kerklaan women were mostly working-class and from farming families, whereas the women I interviewed were mostly middle-class.

What were the results of the interviews I conducted? First of all, having children was an obvious life choice for all of the women interviewed. The number of children women had, however, was a deliberate choice. Almost all women started birth control at some stage in their marital life. For some women this was a hard decision to take. In certain cases, there was clear pressure and control exerted by the church and the social environment of the women. This pressure was not always the same nor did it appear unambiguous. Some of the women interviewed felt it strongly; others felt no pressure at all.

For all women the number of children they wanted was something they talked about with their husbands-to-be. Religion, according to the interviewees, had no direct influence on their ideal family size. Most women wanted children, but not as many as their mothers had had. One of the women interviewed, who was born into a family of eight children, said: 'I did not see that situation [a big family] as ideal for myself. I did not want that many children. Even my mother said "If the pill had been available earlier, I would not have had eight children"'. (Hülsken, 2010, p. 170). In the course of their marriages, ideas about ideal family size could shift. Moreover, sometimes husband and wife disagreed on how many children they wished to have and a compromise needed to be made.

Of the twenty-five women interviewed, all but one used contraceptives for a period during their marriage. Decisions on the use of birth control were taken for various reasons. Within each family, different problems and situations determined choices on birth control. Most women wanted to space out the births or did not wish for any more children. In retrospect they gave specific reasons. Some women were advised to use birth control because of health problems or miscarriages. Also, couples were of the opinion that their family was complete and that it was no longer custom-

ary to have a large family; or that, from a financial point of view, it was not responsible to have a large family. These circumstances made it acceptable for them and their social environment to use birth control. For the women interviewed, family planning was clearly a dynamic process in which strategy and goals were continuously adjusted.

One of the arguments heard most often by women who had children in the 1950s and early 1960s and wished to use birth control, but failed to do so, was that effective methods were not easily available. For example, buying condoms was surrounded by taboos. Periodical abstinence was often used, but experienced as uncomfortable or ineffective. Women who married in the 1960s began to use the pill at some point. However, many women did not opt for the pill or only used it temporarily because of adverse reactions and a (well-grounded) fear of health problems. Information on birth control was obtained from (mostly non-Catholic) literature, acquaintances, friends, educational evenings, educational books, their general practitioner, the radio, newspapers and magazines.

The general image of ignorant and repressed women that Marga Kerklaan (1986) portrayed in her book on Catholic family life does not hold for this group of interviewed women. In particular cases there was certainly pressure from the church or social control exercised by the community that the women lived in, a point also argued by Kerklaan. In consequence there were reservations and taboos about using different kinds of birth control, but the degree to which these reservations existed varied between couples and they certainly did not prevent couples from trying to limit the number of children born.

DISCUSSION

Direct decisions about the use of birth control were not, or were only slightly, influenced by the content of women's magazines. For instance, until the end of the 1960s *Beatrijs*, *Libelle* and *Margriet* contained hardly any coverage of topics such as birth control, sexuality and family planning, although their readers were interested in these issues. The women interviewed were already using contraceptives during the 1950s and 1960s, even before the magazines started to cover this topic. Most of the women interviewed had therefore already gained information on birth control from other sources.

The idea that magazines were a driving force behind social change and

the development of new ideas does not hold for *Beatrijs*, *Libelle* and *Margriet* and the way they wrote about birth control, family planning and sexuality. Until the end of the 1960s the magazines were mainly *followers* of women's new and innovative behavior. The non-commercial Catholic magazine *Doorkijk* of the KVG, however, did cover birth control and family planning at an earlier stage and in a progressive manner, from the 1960s onwards, but this magazine had a much smaller circulation and was hardly read by the women interviewed in this study. The analysis of *Doorkijk* proves that within Catholic (women's) organizations considerable diversity in opinions existed regarding birth control, family size and family planning.

The feminist theory that commercial women's magazines have a negative impact on women and enforce traditional role patterns on their readers also proved untenable. From the end of the 1960s the magazines stimulated women to think and act in a modern way about topics such as the women's movement, sexuality and birth control. Furthermore, the influence of women's magazines was not only limited to the issues discussed explicitly by the magazines, but could also be found in more implicit ways.

During the period 1950-1975, Catholic women tried to influence their fertility outcomes in active ways. For the women interviewed, family planning was a dynamic process in which strategy and goals were continuously adjusted. All twenty-five women, bar one, used contraceptives for a certain period of time during their marriage. Within each family, different problems and situations determined actual birth control strategies. Most women either wanted to space out births or they wanted to prevent further childbearing. In retrospect, they gave specific reasons. Motives were based on the family size of the parental family of the interviewees, health reasons, practical and financial objectives, and moral values. Information on birth control was obtained through the literature on the subject, acquaintances, friends, educational evenings, educational books, their general practitioner, the radio, newspapers and magazines. The rules of the Catholic church, as well as the women's social environment, had some influence in the decision-making process, but this did not prevent women from practicing birth control.

Theo Engelen (2009) stated that there was no sudden break during the 1960s in the opinions and behavior of Catholic women regarding family planning. From 1880 onwards, there was a slow but steady decline in the marital fertility rate for Dutch women. In the pillarized Dutch society, religion had an influence on fertility rates: Catholic women had more children than other Dutch women and were more reluctant to use birth

control. This changed in the late 1960s and 1970s; the Catholic south went through a process of swift secularization and fertility rates dropped rapidly. According to Engelen, this was not the beginning of a new area or a break with previous practices, but the continuation of a structural historical process which had started at the end of the nineteenth century. Women and men gained more influence on their family size due to economic, moral and religious circumstances. New techniques and inventions such as the pill, made birth control easier and more successful in the late 60s.

This qualitative research confirms Engelen's thesis. Although commercial women's magazines demonstrate a sudden change in the late 1960s, when topics such as birth control, sexuality and family planning were discussed and accepted openly, Catholic women evince, in their opinions and behavior regarding family planning, no sudden change in the sixties. Rather, they tried to influence their fertility outcomes in active ways during the whole period between 1950 and 1975.

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INTERVIEWS

The interviews and transcripts are archived in the Catholic Documentation Centre (KDC), Nijmegen, the Netherlands). Collection: Verzameling Marloes Hülsken. The KDC is located in the University Library of Radboud University.

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1. This article is based on my thesis: Hülsken, M. (2010). *Kiezen voor kinderen? Vrouwentijdschriften en hun lezeressen over het katholieke huwelijksleven, 1950-1975.* Hilversum: Verloren. Theo Engelen was supervisor of this PhD-thesis.
2. The interviews took place between 2005 and 2006. The recordings and transcripts are kept in the Catholic Documentation Center (KDC) named: *collection Hulsken*. The KDC is located in the University Library of Radboud University.

[13]

NYNKE VAN DEN BOOMEN & PAUL PUSCHMANN

Born out of wedlock at the river Waal

Illegitimacy in the city of Nijmegen, the Netherlands, 1811-1850.

On 7 December 1827 retired sergeant-major Daniel Grimberg, now working as a tavern keeper in Nijmegen, declared to the civil registrar that, aged 60, he had become father to a son, Johannes. The mother of the child Theodora Derksen, 39 years of age, had already borne him two other children before Johannes: a son, Daniel, born in 1813 and a daughter, Elisabeth, born in 1819.[1] In Johannes' birth record, the civil servant wrote "*buitenecht*" after the names of his parents; this is an abbreviated form of the Dutch word "*buitenechtelijk*", out of wedlock. This was due to the fact that even though Daniel and Theodora were listed as married in the Nijmegen population register and lived together as husband and wife, they had never actually been married.

In this paper, we will readdress data we once collected as students for a seminar on nuptiality and a subsequent master's thesis on a similar subject (Van den Boomen & Puschmann, 2005; Van den Boomen, 2010). The seminar, which took place in the autumn of 2005, was intended to show us fledgling historical demographers how the eternal Malthusian tension between population growth and food supply, typical of pre-industrial societies, was regulated by marriage behavior in the Netherlands during the nineteenth century. Under the inspiring leadership of Theo Engelen, we set out to explore aspects of nineteenth-century courtship and marriage in the city of Nijmegen on the basis of local archival records, after having received a thorough introduction into the scientific literature on marriage and fertility.

We learned that the men and women of nineteenth-century Nijmegen, like their peers in other Western European countries, married late, and

that a considerable proportion of them remained celibate for life (cf. Engelen, 2006; 2014); thus identifying the main features of the so-called Western European marriage pattern, a concept coined by John Hajnal (1965). Low nuptiality was mainly caused by neo-locality, meaning that newly-wed couples were supposed to form a new household, away from their parents. Whereas most people did not obtain sufficient resources for this until later stages in life, some never reached the necessary economic independence to establish their own household and remained unmarried their whole lives. The rules of household formation that individual couples followed at the micro-level had considerable economic and demographic consequences at the macro-level: fertility and population growth were evenly balanced to economic growth (Engelen, 2005; Engelen & Wolf, 2005); a phenomenon Thomas Malthus (1798) had already outlined in his 'Essay on the Principle of Population'. In Malthus' view, limiting a woman's fecund years through marriage restrictions, or preventive checks, was a means of averting positive population checks whereby population growth was balanced out by high mortality due to wars, famines and diseases. However, the only way for preventive checks to be effective in an era without adequate contraceptive measures was for sexual activity to be limited to married couples.

Before long, we were both fascinated by the people who for some reason had chosen to violate the sexual norms of society in that time, a violation made manifest by the birth of one or more illegitimate children, and decided to focus our efforts on their stories.[2] Just like Malthus, contemporary authorities feared that extra-marital fertility would lead to poverty and chaos and therefore tried to control it. The civil registry, introduced in Nijmegen by the French in 1811, gave them an efficient bureaucratic tool for meticulously keeping track of all children born out of wedlock, and of their parents, who had committed the sin of extra-marital sexuality. These same records allow us to revisit our initial study into the trends and causes of illegitimacy in the city of Nijmegen between 1811 and 1850, a period in which extra-marital fertility peaked not only in Nijmegen but also elsewhere in the Netherlands, and throughout most of Europe. In honor of Theo Engelen, to whom we owe both our fascination with historical demography and our mutual friendship, we will now set out to find new insights into the lives of those who defied social conventions regarding sexuality, courtship and marriage in the city situated on the river Waal.
The organization of this chapter is as follows. We will begin by describing the development of illegitimacy in Europe and the Netherlands from the

end of the eighteenth century until the dawn of the twentieth century. Next, we will evaluate how Nijmegen fits into these developments against the backdrop of the city's historical context. After this, we will summarize the scientific debate concerning the rise of illegitimacy during the first half of the nineteenth century. Then we will present basic descriptive analyses for different aspects of illegitimacy. Finally we will draw some tentative conclusions and formulate suggestions about how this line of research can be continued in the future.

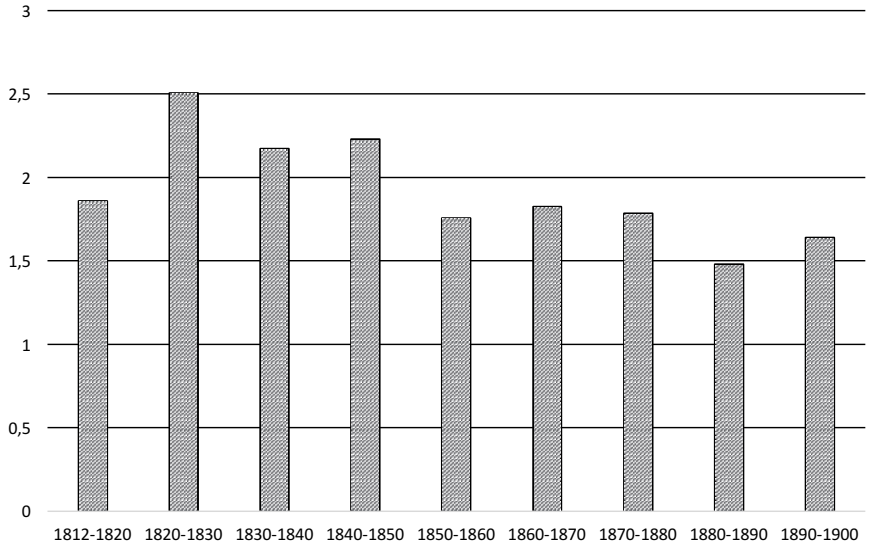
1. HISTORICAL CONTEXT

1.1 THE RISE AND DECLINE OF ILLEGITIMACY, CA. 1780-1900

During the latter part of the eighteenth century, a rise in extra-marital fertility occurred in various European countries. Illegitimacy reached its peak during the first half of the nineteenth century. After 1850, extra-marital fertility started to decline again throughout the continent. Although this trend is observable for most of Europe, there were large national, regional and even local differences in the proportion of births occurring out of wedlock. The highest levels were reported in the capital cities of Vienna, where in the 1840s and 1850s almost half of all children were born out of wedlock, and Stockholm, where some four out of ten births were illegitimate (Matovic, 1986). Although illegitimacy was usually considerably higher in cities than in the countryside, there were also rural regions with very high levels of extra-marital fertility, such as Carinthia, Austria. In this region, just over 40% of all children were still being born out of wedlock at the turn of the twentieth century. In contrast, in neighboring rural Tyrol only approximately seven out of one hundred births were illegitimate (Kok, 2005). Even though illegitimacy started to decline during the second half of the nineteenth century in most European countries, there was no return to the particularly low levels of the period prior to 1750 (Shorter, Knodel & Van de Walle, 1971).

The Netherlands was amongst the countries with the lowest illegitimacy levels in Europe (Kok, Van Poppel & Kruse, 1997). As Graph 1 shows, the percentage of illegitimate births stayed well below three per cent for the Netherlands as a whole throughout the nineteenth century. During the 1820s, the percentage of births out of wedlock reached its peak of 2.5% and

Graph 1. Illegitimate births as a percentage of total live births (n=63,146), the Netherlands.



Source: HSN release Civil Certificates 2017_01.

during the latter half of the nineteenth century the percentage of illegitimate births never exceeded two per cent. However, certain provinces and cities deviated considerably from the national average. For instance, the figures for the province of Noord-Holland show an increase from the 1780s onwards, reaching on average a maximum of 8% in the medium-sized urban centers of Alkmaar, Edam, Enkhuizen, Haarlem, Den Helder, Hilversum, Hoorn, Medemblik, Purmerend and Zaandam in the 1820s, after which a gradual decline set in (Kok, 1993). A similar trend has been observed for Amsterdam, although its levels reached a considerably higher peak of 18% (Hofstee, 1981). To a large extent, illegitimacy in the Netherlands followed the European trend, although the decline set in earlier. In Austria, for instance, illegitimacy levels did not begin to decline until the 1870s (Mitterauer & Sieder, 1985). Moreover, extra-marital fertility reached such low levels in the Netherlands by the turn of the century that the country earned itself the reputation of being Europe's 'moral nation' (Kok, 1991).

The French occupation had imposed a heavy burden on the military stronghold of Nijmegen at the beginning of the nineteenth century. Heavy taxes and excessive military costs left the city destitute when the French forces abandoned Nijmegen in 1814. The only beneficial legacy left to Nijmegen was the efficient bureaucratic and legal system that the French had introduced when the Netherlands became part of the Napoleonic empire (Jansma & Schroor, 1991). The city struggled for decades to overcome the socio-economic wounds inflicted by the French. In the 1810s and 1820s, prices of basic resources soared, as did unemployment levels within the city borders. The city's economy depended heavily on the local market and agriculture, and lacked sufficient new economic impulses during the first half of the nineteenth century. The majority of Nijmegen's districts consisted of dilapidated housing; the streets doubled as open sewers and many of the city's residents lived in extreme poverty. Nijmegen regularly witnessed outbreaks of infectious diseases: smallpox in 1820 and 1850 and cholera in 1832 (Buylickx, 1986). The poorer and predominantly Roman Catholic inhabitants particularly suffered; although the majority of the population were Roman Catholics, the city's elite was largely made up of Protestants. This in turn led to religious tensions within the city, which only abated after the 1848 constitution gave more Roman Catholic men the vote and thus slowly promoted emancipation amongst Nijmegen's Roman Catholic population.

Due to its status as a garrison town, the military played a considerable role in the daily life of Nijmegen. In 1830, war was on the horizon as the southern half of the Netherlands sought its independence during the Belgian Revolution. A large part of the nearby province of Limburg rallied to the Belgian cause, which led the authorities to declare a state of war in Nijmegen (Pikkemaat, 1988). This lasted until 1839, when the Netherlands finally albeit reluctantly, acknowledged the independent kingdom of Belgium. The subsequent departure of the majority of soldiers meant another setback for the city's economy (Klep, 2005), as the local taverns, pubs, brothels and other businesses had thrived on the presence of so many military men. However, Nijmegen kept its official designation as fortified town, which meant that any expansion outside the walls was prohibited. As the population slowly increased from about 13,000 inhabitants at the start of the nineteenth century to approximately 20,000 around 1850, the city walls became an increasingly restrictive impediment to Nijmegen's social, econ-

omic and demographic development since the city was too small to house a population larger than 15,000 people (Engelen, 2005). This situation would not change until 1874, when an official decree from the Ministry of War ended Nijmegen's fortified city status and permitted the demolition of its walls. It heralded an entirely new era for the city by the river Waal.

2. HISTORIOGRAPHY

Although the historical phenomenon of extra-marital fertility has often been associated with illicit love and prostitution in particular, the scholarly literature on the subject has identified a wide range of potential causes for the observed rise in illegitimacy from the latter half of the eighteenth century onwards. Most authors seem to agree that a multitude of factors contributed to the upward trend in illegitimacy and that simple monocausal arguments cannot sufficiently explain the complex historical reality.

What we know is that non-marital fertility was something which was almost exclusively found among the working classes, and it is therefore not surprising that several authors have pointed to the role of industrialization and urbanization. For Edward Shorter (1971; 1973), the rise of extra-marital fertility signified an early sexual revolution among laboring women. Whereas in the proto-industrial period women had been working with their fathers and husbands within the home to earn a family income, through the rise of wage labor in the industrial sector they had been able to earn an individual wage outside the walls of the family home – and often away from the controlling eyes of relatives - from an early age. According to Shorter, this would have had a liberating effect on them. More economic independence led these women to act more freely in the domain of love and sexuality. In urban areas, a new subculture of young people arose, in which both married and unmarried women had much more sexual intercourse than previously had been the case. Consequently, extra-marital fertility increased. This was only counteracted in the second half of the nineteenth century, with the introduction of contraceptive measures.

The historians Tilly, Scott and Cohen (1976) were among the first to criticize the idea of an early nineteenth-century sexual revolution. They argue that instead of liberating women, the industrial revolution made uneducated women from the lower social classes more vulnerable. Women's wages declined and were considerably lower than men's, and even the opportunities for employment had declined during the early nineteenth cen-

tury. In order to decrease the financial burden of their parents, women left the parental household early and moved to cities, where they started to work mostly as domestic servants and seamstresses. Their wages were, however, too low to support themselves, and they often lived a lonely life in the urban environment. Their vulnerable economic position led them to find a partner and form a stable union. With that aim in mind, they engaged in sexual relationships in anticipation of marriage, just as earlier generations of young women had done. Yet the new generation of men was much more likely to break a marriage promise, mainly due to economic challenges. For the same reason, an increasing number of couples decided to cohabit instead of marrying. This allowed them to avoid the costs involved in contracting an official marriage. Tilly, Scott and Cohen account for the decline of illegitimacy in the latter half of the nineteenth century mainly by pointing to the improved economic conditions.

David Levine's work (1977) links increasing levels of illegitimacy to the economic uncertainty faced by many women. The growing world economy led to worse labor prospects for women. According to Levine, extramarital fertility increased in times of economic uncertainty and hardship as the prospects of marriage declined. Couples would postpone their marriages in anticipation of improved economic circumstances, but would not abstain from intercourse, thus facilitating the births of illegitimate children. According to Levine, a child born out of wedlock was the product of a *marriage frustrated* rather than of a single woman desperately trying to form a union with a man through pregnancy.

Peter Laslett's (1980) explanation for increasing illegitimacy moves beyond poor economic circumstances and focuses on the relatively large number of women who had given birth to multiple illegitimate children. Unwed mothers formed their own social network and often were even related to one another, thus constituting their own subculture or *bastardy-prone sub-society*. Within this subculture, illegitimacy, prostitution as a way to earn an income, and overall deviancy from the contemporary sexual norms were normalized. Its members were mostly from the lowest classes. Both men and women within the subculture often produced several illegitimate children and were thus considered *repeaters*. As overall fertility rose, fertility among the women of the bastardy-prone sub-society increased at a faster rate, accounting for the rise in illegitimacy (Laslett & Oosterveen, 1973).

Jan Kok (1991; 1993; 2005) also points to the role of the social network, but from a completely different perspective. He underlines the fact that

pre-marital sexuality had long been part and parcel of North-Western European marriage customs; known as 'bundling' in Scotland, '*fensterln*' in Germany and '*kweesten*' in the Netherlands. What these and other related customs had in common was that village boys – not strangers – were permitted to have sexual contact with marriageable girls, even without an official engagement, under the watchful and approving eyes of parents, peers and other villagers. In the event of a girl becoming pregnant, her family and other witnesses would hold the young man to his responsibility to marry her. Indeed, these customs always ensured a kind of commitment towards a potential marriage, and, according to Mitterauer (1983), it was also a way of testing a young woman's fecundity. While these pre-marital sexual customs did not lead to a large number of children born out of
550 wedlock in pre-modern times, things changed with modernization. Kok (2005) explains this by the breakdown of contemporary social control systems, through which it became easier for young men to escape their marriage commitments after their intended brides had fallen pregnant.

3. SOURCES AND METHODS

The civil registers were a way for contemporary authorities to gauge the development of the local population. Today, they offer us an insight into its moral behavior towards marriage and sexuality. In 1811, the French *Code Civil* was introduced in the Netherlands. From that point onwards, local authorities were obliged to register all births, marriages, divorces, and deaths. To ensure that registration was carried out according to uniform standards, the central administration issued a manual to instruct local officials how to record these life events. However, not all civil servants respected the official guidelines. Moreover, the compulsory nature of this new form of registration proved to be quite difficult for the public. For instance, people had to register a new-born baby within three days of the actual birth under pain of a fine. However, a comparison of baptismal records and civil birth registers shows that many parents neglected to register the birth of a child during the initial stages of the civil registry (Noordam, 1986). Ultimately, the French system was replaced by the Dutch civil code in 1838.

We have used the birth registry as a starting point, in both physical form in the Regionaal Archief Nijmegen (Regional Archives of Nijmegen) and digitized form. We have looked at all births where the word '*onge-*

huwd' (unmarried) was added after the mother's name in cases where the father happened to be unknown (*N.N.*) or where the word *'buitenechtelijk'* (out of wedlock) had been added to the names of the child's parents in the birth certificate. According to the civil code, a child was illegitimate if it had not been conceived and born within matrimony, the latter meaning a civil marriage. In cases where a child was the product of adultery and the mother was married, the child was considered to be the legitimate child of her husband. We have measured illegitimacy as the illegitimacy ratio, i.e. illegitimate births as a percentage of all live births in Nijmegen in the period between 1811 and 1850. The total number of live births was derived from the Historical Database Dutch Municipalities (HDNG) (Boonstra et al., 2003).

The data on legitimizations was based on the additional information written down by the civil registrar in the margins of birth certificates. We have then used the national digitized civil registries to find more information for the years 1827 and 1850, as a more detailed sample of all the illegitimate births between 1811 and 1850.[3] Since illegitimacy reached its peak in Nijmegen during the 1820s, we have chosen 1827 as our first detailed sample year. This specific year coincides with the city's second attempt to compile a comprehensive population register, detailing the addresses, household structures and professions of its people. Since the level of illegitimate births declined rapidly both in Nijmegen and the Netherlands after 1850, we have chosen 1850 as our second sample year. We have used Nijmegen's digitized population register to find information on the home addresses of all families with children born out of wedlock in 1827 and 1850.[4]

4. COURTSHIP, MARRIAGE AND ILLEGITIMACY

4.1 ILLEGITIMACY AND MARRIAGE

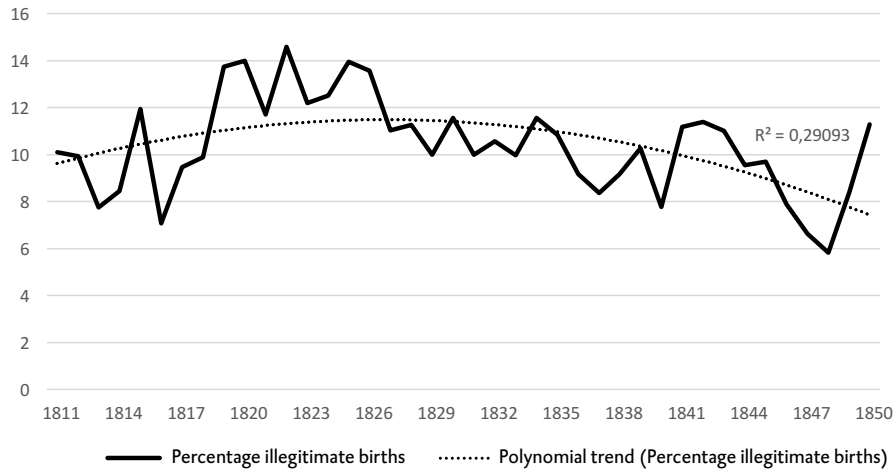
As was explained earlier, illegitimacy increased in Nijmegen, and in the Netherlands generally, between 1750 and 1850. Graph 2 shows that illegitimacy in Nijmegen fluctuated quite considerably from year to year, but the polynomial trend line does indeed suggest an upward trend until the 1820s, followed by a decline, and a brief increase in the early 1840s and again in 1850. The trend of increase followed by decline, which has been observed for other parts of Europe, and for the Netherlands as a whole,

obviously fits the case of Nijmegen as well. In fact, research on other Dutch cities shows similar results. In Utrecht, illegitimacy increased until 1825, reaching its peak with 17% in 1822 (Sterk, 1987). For the garrison towns of Breda and 's-Hertogenbosch, the proportion of children born out of wedlock peaked between 1821 and 1825 at 16.7% and 17.2%, respectively. This was considerably higher than that of the neighboring city of Tilburg, where illegitimacy peaked at nine per cent during the 1830s (Vermunt, 1965). In The Hague, illegitimacy reached its maximum in 1822 with 17% of all children being born out of wedlock (Stokvis, 1986). The illegitimacy ratio that we see in Nijmegen during the 1820s is quite similar to that of Amsterdam in the 1820s. Compared to cities such as Vienna, Stockholm and Paris, the percentage of children born out of wedlock in Nijmegen was not really shocking, but by Dutch standards it was relatively high, considerably above that of the medium-sized urban areas of Holland and far above the national average.

Nijmegen has proved to be a typical example of the Western European marriage pattern. The average age at first marriage was 27.4 years for women during the nineteenth century (Engelen & Hsieh, 2007). As the overpopulation within the city walls increased, the marriage restrictions in place intensified, and the average age at marriage went up accordingly. Although there were no significant differences in the average age at marriage between Roman Catholics and Protestants, there were considerable differences between the various socio-economic strata of the Nijmegen population; the lowest average age of 26 years was found amongst proletarian brides, against an average of 27.4 years amongst skilled laborers and 27.1 years amongst middle class brides. For farmers, economic independence was harder to obtain, as the average age at marriage for agricultural brides of 29.3 years demonstrates (Engelen, 2014). In general, people in Nijmegen married earlier in prosperous times and later when economic circumstances were tougher.

Stricter marriage restrictions as a consequence of negative economic development did not necessarily mean young unmarried couples were more inclined to deviate from the societal norms concerning marriage and fertility. Laslett's *courtship intensity model* (1980) sheds light on this phenomenon: as the prospects of marriage improved, courtship amongst young unmarried people intensified; yet courtship and premarital sexuality did not always lead to actual marriage, which explains why illegitimacy increased in times when marriage prospects improved. Although Graph 3

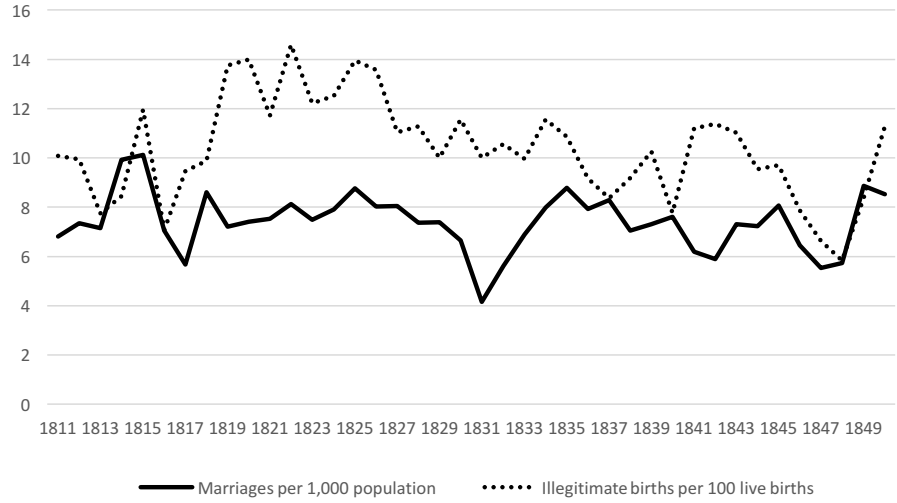
Graph 2. Illegitimacy ratio in Nijmegen, 1811-1850.



Source: Birth registers 1811-1850, Regionaal Archief Nijmegen.

shows that trends in marriage and illegitimacy in Nijmegen between 1811 and 1850 did not run perfectly parallel, there was indeed a positive correlation between the two (R=0.259). This indicates that increasing rates of marriage, reflecting improved economic opportunities, coincided with an increase in the illegitimacy ratio in Nijmegen, which makes David Levine's (1977) conclusion that increasing rates of illegitimacy were a result of frustrated marriages rather unlikely. After all, Levine's argument suggests a negative relationship between marriage rates and illegitimacy, while we find a positive relationship. The same result also makes it unlikely that rises in extra-marital fertility were the result of young people purposefully violating social norms around sexuality, as suggested by Shorter (1971). After all, the positive relationship between marriage rates and illegitimacy suggests that pre-marital intercourse took place in anticipation of marriage, which can hardly be defined as revolutionary.

Graph 3. Crude marriage rate and illegitimacy ratio in Nijmegen, 1811-1850.



Source: Birth registers 1811-1850, Regionaal Archief Nijmegen; Historical Database of Dutch Municipalities (hdng) (Boonstra et al., 2003).

4.2 BRIDAL PREGNANCY, AGE AT BIRTH AND LEGITIMIZATION

The fact that premarital sex was mainly intended to end in marriage can also be inferred from the relatively high proportion of bridal pregnancies. How one should determine, on the basis of marriage and birth dates, what should be considered a bridal pregnancy is not self-evident. We do not want to include couples who did indeed abstain until after their marriage, as social rules dictated, but whose first child was born prematurely. The great majority of live births occur within a gestation period of between 35 and 40 weeks (Engelen, 2014). A child born between seven and nine months after marriage could have been conceived in the period of intended marriage. That is why we only consider births occurring within the period of seven months following the wedding as proof of a bridal pregnancy. Naturally, this means that we will have omitted a number of bridal pregnancies; this includes those that ended in a miscarriage, but otherwise we will have included women who were not pregnant at the time of the wedding, but who gave birth prematurely.

In Table 1, the number of bridal pregnancies per decade is presented as a percentage of all marriages, for which a first birth was found in the local

civil registers. For this reason, marriages of couples who migrated out of the city directly after marriage, as well as sterile couples, are excluded. During the nineteenth century, about a fifth of all brides in Nijmegen were pregnant at marriage. In the Dutch countryside, the proportion of bridal pregnancies was slightly lower, mainly because the stricter social control in rural areas obstructed premarital sexuality more successfully than in urban areas (Engelen & Meyer, 1979; Engelen & Hillebrand, 1985). In Nijmegen, bridal pregnancies, just like births out of wedlock, occurred disproportionately amongst laborers and proletarians and to a far lesser extent amongst farmers and the lower- and upper-middle class (Engelen, 2014). This need not surprise us, as the middle class was in fact the central bearer of contemporary chastity norms, and middle-class people at the time viewed sexual restraint as the ultimate proof of self-control (Van Ussel, 1982).

It is seemingly intuitive to assume that an increase in illegitimacy would occur when bridal pregnancies were on the decline. Yet in Noord-Holland, the trend in illegitimacy paralleled that of bridal pregnancies (Kok, 1991). Table 1 shows that, by and large, the same applies to Nijmegen, suggesting that bridal pregnancies and illegitimate births were two sides of the same coin and that one did not compensate for the other. Decreases in bridal pregnancies did not lead to higher illegitimacy, but rather to lower ones. This makes it likely that the decision on whether or not to marry in cases of pre-marital conception was determined by other factors than those which affected the rates of pre-marital sex.

Table 1. The proportion of bridal pregnancy and illegitimacy in Nijmegen, 1821-1890.

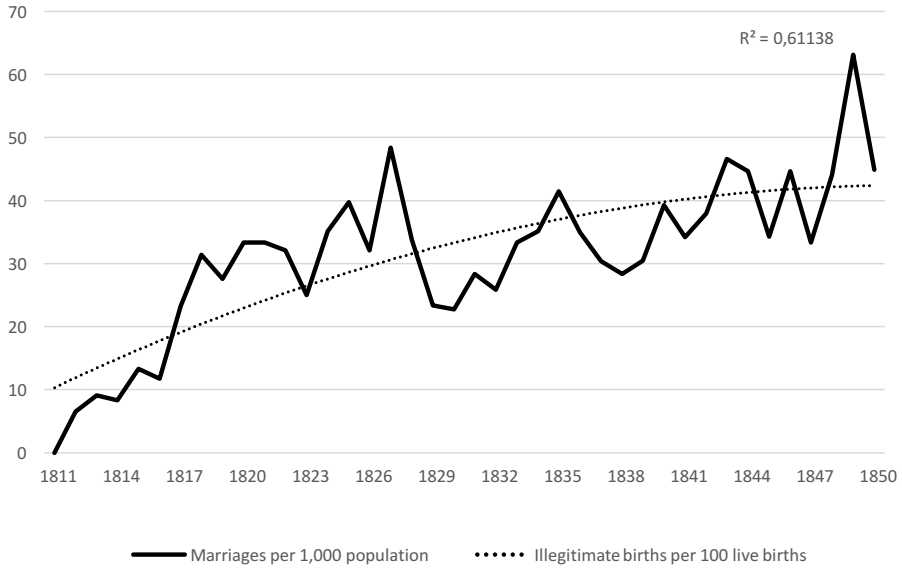
Period	**Marriages**	**Births within 7 months after marriage**		**Illegitimate births**
	N	N	Percentage	Percentage
1821-1830	637	152	23.9	12.3
1831-1840	744	176	23.7	9.7
1841-1850	836	189	22.6	9.4
1851-1860	862	154	17.9	7.4
1861-1870	1064	229	21.5	7.5
1871-1880	1098	215	19.6	5.4
1881-1890	1178	290	24.6	3.4
1821-1890	6419	1405	21.9	7.9

Source: Engelen & Hsieh, 2007, p. 87; Birth registers 1811-1850, Regionaal Archief Nijmegen

The age at marriage is a key mechanism within the Western European marriage pattern, and the age of pregnant brides can serve as another indication of whether couples willingly deviated from social standards by forcing a marriage by means of pregnancy or whether the pregnancy was caused by anticipating marriage. In other words, to what extent can forced marriages be considered to be premature marriages? In Noord-Holland, pregnant brides tended to be slightly younger between 1815 and 1834, with their average age at marriage being 24.6 years against 25.1 years amongst non-pregnant brides (Kok, 1991). For Nijmegen, this difference was only marginally larger during the first half of the nineteenth century. After 1850, the age difference between pregnant brides and their non-pregnant peers started to increase. Throughout the century, the age at marriage of pregnant brides averaged 25.7 years against 27.5 years amongst non-pregnant brides (Engelen & Hsieh, 2007). Moreover, the changes in the average age at marriage between the two groups largely followed the same trend throughout the century, which suggests that bridal pregnancies generally did not pose an intentional threat to the social rules concerning marriage and sexuality. In 1827, the average age of the mother at first birth was slightly higher than that of pregnant brides and lower than that of non-pregnant brides at 26.3 years, based on the 25 women out of 62 whose age we could actually find in the local population and civil registers. For 1850, of the 78 children born out of wedlock, we could find the age of 50 unmarried mothers in the population registers, of whom 11 had previously had children. The average age at first birth amongst single mothers in 1850 was 26.1 years. These results suggest that even single mothers did not necessarily undermine the functioning of Nijmegen's marriage restrictions.

The relatively high proportion of legitimizations, displayed in Graph 4 for the period 1811-1850, is another indication that pre-marital sexuality in Nijmegen was mainly a prelude to marriage. Over the entire period, over a third of all children born out of wedlock were legitimized later in life when their mother and/or father married. Furthermore, a growing number of children born out of wedlock were legitimized over time. This might have been the result of economic improvement during the 1830s, however small this improvement was (Klep, 2005), as it allowed those who had been unable to cover the costs of the wedding before the birth of a child to marry at a later stage in life. This trend might also reflect that concubinage as a long-term strategy was on the decline, and that marriage increasingly became the social norm over time. This last interpretation would be in line with the international literature (Coontz, 2014), but we

Graph 4. Percentages of legitimizations per 100 live births out of wedlock in Nijmegen, 1811-1850



Source: Birth registers 1811-1850, Regionaal Archief Nijmegen

have to be careful. After all, the upward trend might also have been affected by many other factors, such as declining infant and child mortality. As more infants and children survived, the likelihood that a child would be legitimized at some point in time clearly increased. Last but not least, certain people were legally barred from marriage; a group of people who to a large extent were responsible for the relatively high levels of illegitimacy. We turn our attention to this group in the following paragraph.

5. CHILDREN OF THE GARRISON

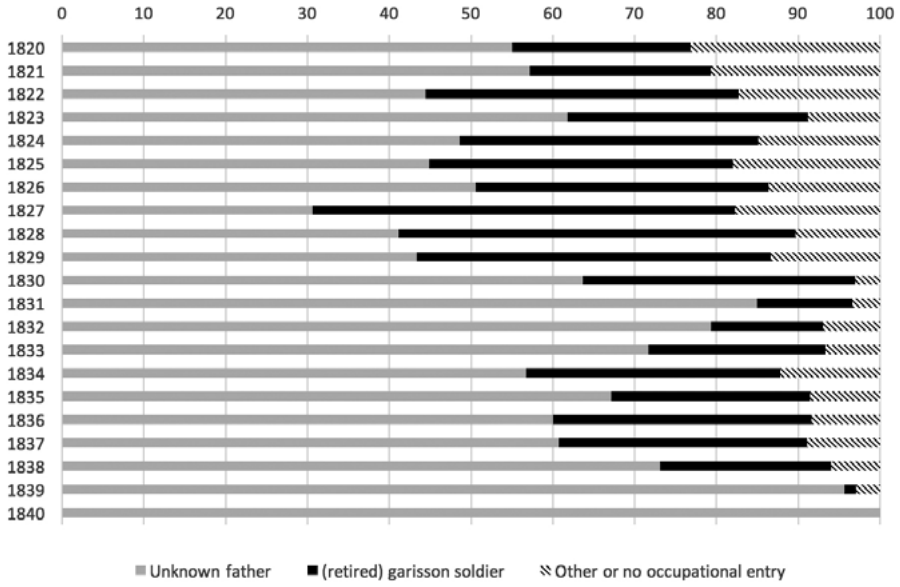
The introduction of the French Code Civil weakened the legal position of single mothers, as paternity actions were abolished under the new law. These actions had enabled unmarried mothers to legally oblige the begetter of their illegitimate child to either marry them or to pay for the child's maintenance (Damsma, 1999). Yet the lack of this legislative instrument seemingly did not disadvantage many single mothers in Nijmegen, as a considerable number of unmarried men openly admitted to the local civil servant that they had fathered an illegitimate child, as becomes clear

in Graph 5; over 40% of all illegitimate births during the 1820s and 1830s were declared by the child's father himself. Concubinage was no longer a criminal offence in the Code Civil, and although most couples had not been prosecuted before this time, this change meant that there was no longer a legal obstacle to unmarried couples living together (Kok, 1991).

Looking at Graph 5, it immediately becomes clear that a considerable portion of these fathers were actually enlisted in, or retired from, the city's garrison, based on the profession that the city registrar had written down on the child's birth certificate. The garrison played a substantial role in Nijmegen's daily life until well into the twentieth century. Due to the city's garrison town status during the first half of the nineteenth century, fortifications could not be altered in any way and no buildings were allowed within range of the city. The soldiers were housed within the city walls, and, due to their numbers, found accommodation not only in the local barracks, but also in the city's convents and houses (Nabuurs, 2009). Nijmegen's pubs, taverns and brothels, often located in the poorer lower city districts, thrived due to the garrison. Moreover, the rise of illegitimacy can, at least in part, be attributed to the presence of so many, often unmarried, soldiers. In Nijmegen, the garrison increased from 700 to 2,400 soldiers in the period between 1830 and 1839 (Klep, 2005). In Tilburg and 's-Hertogenbosch, the deployment of the garrison during the Belgian Revolution caused a rise in illegitimacy as more soldiers were housed within the two cities (Vermunt, 1965). The same seems to have been the case for Nijmegen.

However, most soldiers were barred from marriage. In 1795, a decree was issued stating that only soldiers who had served more than six years could marry. Officers could apply for an official exception, but many requests were still refused. In 1808, another decree ruled that only one-fifth of all captains and one-eighth of all first lieutenants could receive a dispensation to be married. Lower officers were completely prohibited from marrying. Any violation of these rules would be punished by discharge. Nevertheless, this did not necessarily prevent soldiers from forming a family of their own in concubinage (Kok, 1991); their partners and children would reside in the vicinity of the barracks and followed them as they were deployed elsewhere. All things considered, the prohibition on marrying seemed to have evolved into an acceptance of concubinage for some (retired) soldiers.

Graph 5. Relative distribution of illegitimate births by (1) unknown father, (2) father known, (retired) garrison soldier (3) father known with other or no occupational entry



Source: Birth registers 1820-1840, Regionaal Archief Nijmegen.

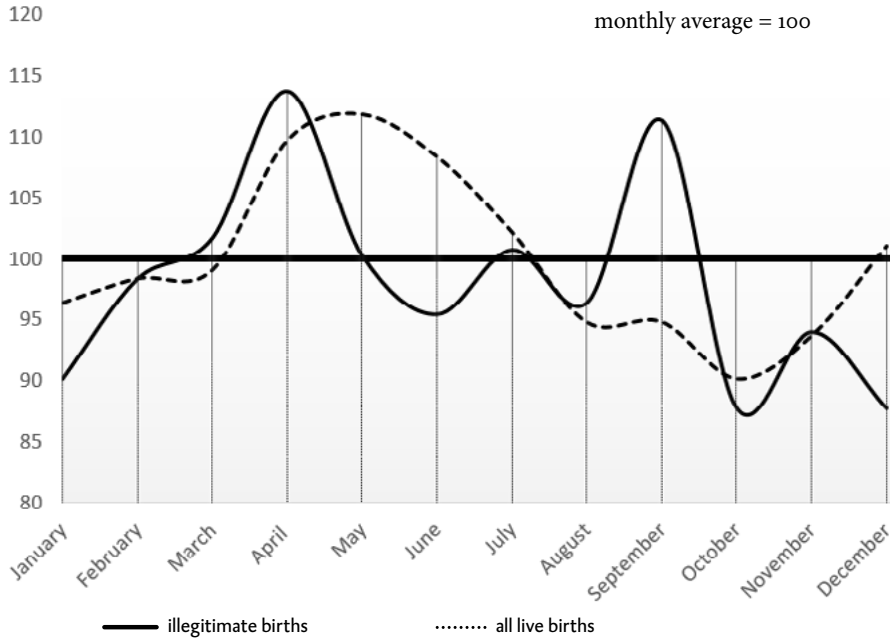
In Nijmegen, an overwhelming proportion of illegitimate children with a known father can be attributed to (retired) garrison soldiers, particularly in the period between 1820 and 1839 as the number of soldiers stationed within Nijmegen increased drastically. The bulk of the troops left after 1839, which might explain the steep decline in the percentage of illegitimate children with their father's name on their birth certificate. Of all 409 children fathered by (retired) garrison soldiers, the father did eventually marry the mother of their illegitimate child or children in 173 cases. We do certainly find traces of soldiers living in concubinage in Nijmegen, as the couple we introduced earlier on, Daniel Grimberg and Theodora Derksen, illustrate. Nonetheless, it remains unclear whether this concubinage was a result of legislative, social, economic or political obstacles keeping them from marrying or whether it was rather a form of deliberate deviance from social norms.

Another way of acquiring insight into the phenomenon of illegitimacy is by exploring seasonality patterns in extra-marital conceptions. Across societies there are clear fluctuations in live births, both in and outside of marriage, over the course of the year. This has, amongst other things, to do with climatological factors, work patterns, and cultural regulations and practices around marriage and sexuality (Engelen & Lin, 2011). When it comes to climate, high temperatures for instance discourage sexual activity, while at the same time, it has a negative impact on spermatogenesis. Very low temperatures also have a negative impact on fertility (Ruiu & Breschi, 2017). Furthermore, it has been shown that conceptions drop at
560 times of intensive work, which for instance was the case in eighteenth- and nineteenth-century German villages during harvest times (Knodel, 1988). Moreover, the Church might have had an impact, by discouraging or prohibiting sexual activity during certain periods such as Lent (Engelen, 2018). Last, but not least, marriage seasonality had an important impact on birth seasonality since the date of marriage was closely related to that of first sexual intercourse (Ruiu & Breschi, 2017). In Nijmegen, just as in the rest of the Netherlands (except for Limburg), May was the favorite month for weddings, and there were clear dips in March and December, due to the fact that contracting a marriage was forbidden by the Church during Lent and Advent (Engelen, 2017; 2018).

While all the aforementioned factors affected all live births in principle, there were also factors that were of special concern to the seasonality of births out of wedlock and bridal pregnancies. These are mostly related to events, which allowed young people to meet and date each other and which increased the risk of engaging in pre-marital sexual activity. In the nineteenth-century, such opportunities for young people from the higher social classes were few, since they were continuously chaperoned, but the laboring classes enjoyed much more freedom from their parents. The ideal occasions for dating were local fairs and dance parties (Kok, Bras & Rotering, 2016). As these were organized at different dates throughout the country, such occasions would not lead to spikes in extra-marital conceptions at the regional or national level, but they might present themselves very clearly at the local level.

Graph 6 shows the seasonality in conceptions for all live-born children, as well as separately for those children born out of wedlock, in Nijmegen in the period between 1811 and 1850. The estimated conception months

Graph 6. Seasonality of conceptions of illegitimate births and of all live births, 1811-1850



Source: Birth registers 1811-1850, Regionaal Archief Nijmegen.

have been determined by deducting 280 days from the birth date and taking the month in which the resulting date occurs. The number of conceptions is expressed for each month as an index number of the average number of conceptions per month throughout the whole research period; the figure has been adjusted for the number of days per month, and the lines in the graph have been smoothed. Unfortunately the data did not allow us to make a distinction between first and subsequent births.

Graph 6 shows us some clear patterns. For all live births a peak was reached in May, which coincided with a strong marriage peak: one in five marriages in Nijmegen in the period 1811-1850 were contracted in May (cf. Engelen, 2018). This underlines the fact that marriage, sexual intercourse and conception were strongly interconnected. Although the picture might be blurred by the fact that second and subsequent births are included, it is quite likely that the number of conceptions in the month of June were also above average, since for some of the newly-married couples a few weeks would have elapsed before sexual activity led to conception. If we continue this line of reasoning and combine it with what we know about

courtship rituals in the nineteenth-century Netherlands, the fact that the highest number of live births occurred in April is, at least in part, due to the fact that many couples began to have sexual intercourse before marriage, resulting in bridal pregnancies.

If we bear this information in mind when looking at the seasonality of conceptions of babies who were born out of wedlock, we see some interesting similarities and differences. The conceptions of children who were ultimately born out of wedlock peaks strongly in April. This suggests that these couples had intercourse in anticipation of a marriage in May, which then did not take place. The upward trend in conceptions in early spring is very much the same as for all live births, but the peak is reached earlier and the subsequent downward trend sets in earlier and faster. As was the case with bridal pregnancies, these couples had sex ahead of marriage, but they either canceled or never went through with their weddings. One potential reason for this is that the men lost their jobs. Traditionally, many couples in the Netherlands chose to marry in May, because that was the time when labor contracts and leases were renewed (Van Poppel, 1995). However, this also meant that some did not have their contracts renewed and that they did not find a new job immediately. In turn, couples decided to postpone or abstain from marriage, and this decision might have been taken at a point when the couple was not yet aware of the pregnancy. This underlines Levine's (1977) point about frustrated marriages, but this picture does not fit all conceptions.

The peak in conceptions of illegitimate children in September is also very striking, but very different in nature from the one in April, since it accompanied a clear dip in all live births. This deviation leads us to believe that these conceptions were much less targeted towards marriage, and were rather the result of sexual contact between individuals who did not have a stable relationship. This reasoning is supported by the fact that September was the month in which Nijmegen's annual fair was held. In both the city as in the rest of the Netherlands, the fair was the social event of the year for young people, especially from the lower classes. It offered them a chance to dress up, drink, have fun, but also to flirt and meet potential partners either from within the city or from its surrounding region. For some, this obviously would have led to pregnancy.

From October through to January, the number of conceptions – both of all live births and of those born out of wedlock – was considerably below average, which was most likely related to the cold weather, the marriage ban during Advent and the fact that there were less opportunities

for unmarried people to meet each other. The fact that there is no spike at the time of Carnival (prior to the liturgical season of Lent) can be explained by the fact its celebration was prohibited in the first part of the nineteenth century. Finally, it is remarkable that there is no dip in conceptions observed for March, which coincided with Lent. This is all the more remarkable since very few marriages (on average 3% of all yearly marriages) were contracted during this month (cf. Engelen, 2018). Finally, the dip in conceptions for all live births in August, September and October might be related to harvesting, as many young men worked outside of the city walls in the fields.

7. A BASTARDY-PRONE SUB-SOCIETY? 563

Given the seasonality patterns in extra-marital conceptions described above, we have to consider the possibility that some illegitimate children were the unintended products of sexuality in an age without effective contraceptives. Moreover, the birth of one or more illegitimate children and concubinage might not have been at odds with the social rules for all people in Nijmegen. For Laslett and Oosterveen (1973), the number of illegitimate children in England could be attributed to a disproportionate number of single mothers, indicating that at least some unmarried mothers formed their own subculture in which illegitimacy was socially accepted and passed on from generation to generation. These mothers were often related to each other. Their marriage partner, if they ever found one, was often born out of wedlock himself or had fathered an illegitimate child beforehand. Prostitution was an accepted way to earn an income. The *swallows*, or women who had only borne a single illegitimate child, were only part of this subculture if they were related to other single mothers, in contrast to the *repeaters*, or mothers of multiple illegitimate children (Laslett, 1980).

Yet marriage remained the best way for women to protect their socio-economic position in the long run. It remains questionable whether this bastardy-prone sub-society was due to a true defiance of societal norms regarding sexuality and family formation. Diminishing marriage prospects meant that more women were willing to take greater risks during courtship, hoping that their consent to premarital intercourse would increase their chances of marriage. However, it also meant that more women were abandoned by their intended husbands before their wedding. In other

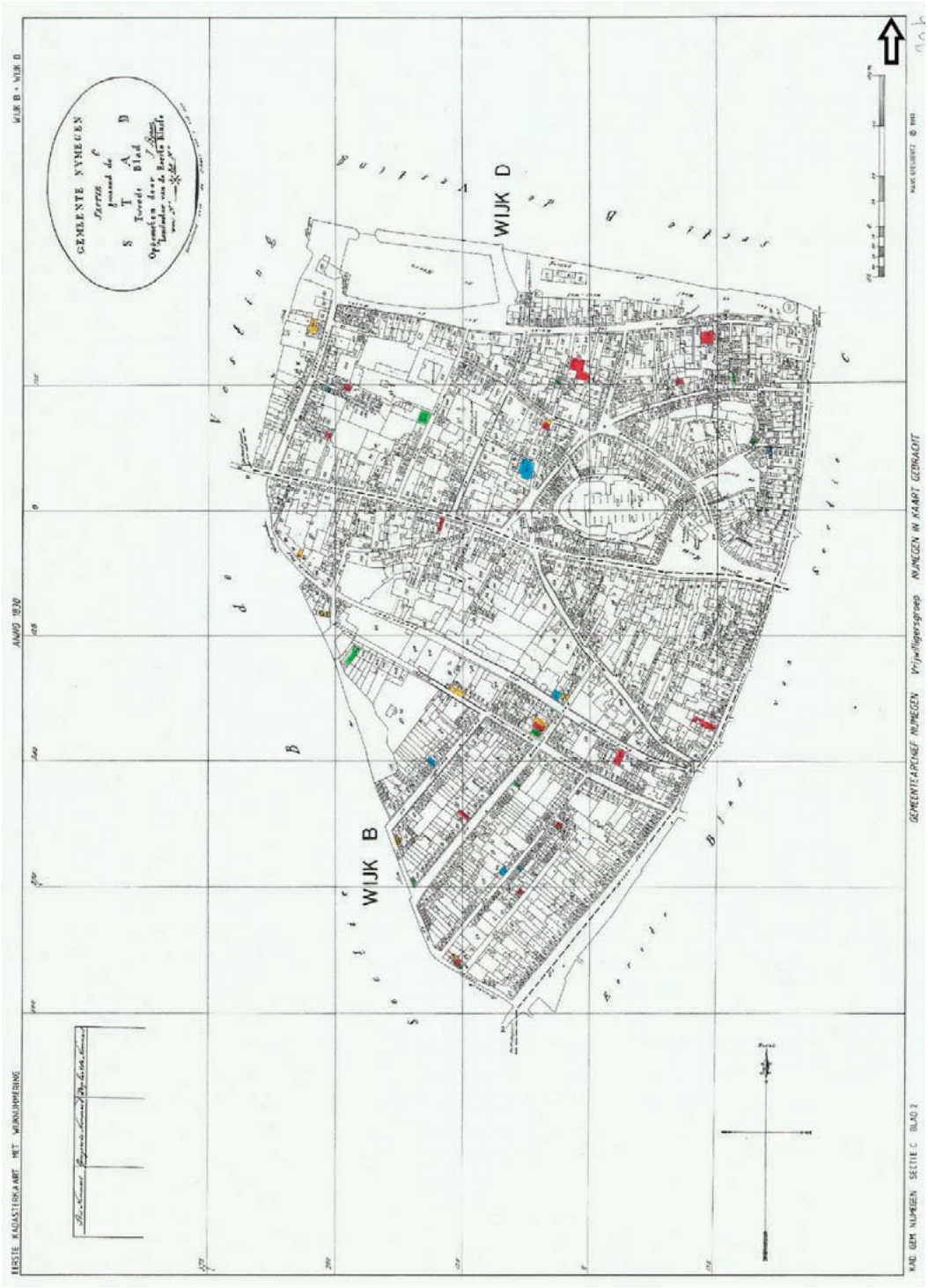
words, the number of women who had lost out on the marriage market entirely grew substantially in times of economic hardship. Hoping for marriage, they entered into often unsteady relationships, which in turn led to more illegitimate children. Their children may have perpetuated this subculture inclined towards illegitimacy (Kok, 2005). In this sense, the bastardy-prone sub-society was a direct consequence of the Western European marriage pattern; unmarried mothers gravitated towards each other to find their own socio-economic niche within society, as they had little chance of finding themselves a husband.

In late eighteenth-century Rotterdam, only about twelve per cent of all unmarried mothers had multiple illegitimate children, and ten per cent of these repeaters did eventually marry, indicating that there was hardly a bastardy-prone sub-society in Rotterdam at the time (Boerdam, 1985). The single mothers of Rotterdam mainly lived in the poorest areas of the city. The same applied to Utrecht in the period between 1775 and 1825 (Sterk, 1987). There were no direct signs of a bastardy-prone sub-society, but both swallows and repeaters lived in the poorest parts of Utrecht. They did not necessarily work as prostitutes, at least not officially. As such, the clustering of single mothers should be interpreted as a sign of poverty rather than proof of a bastardy-prone sub-society.

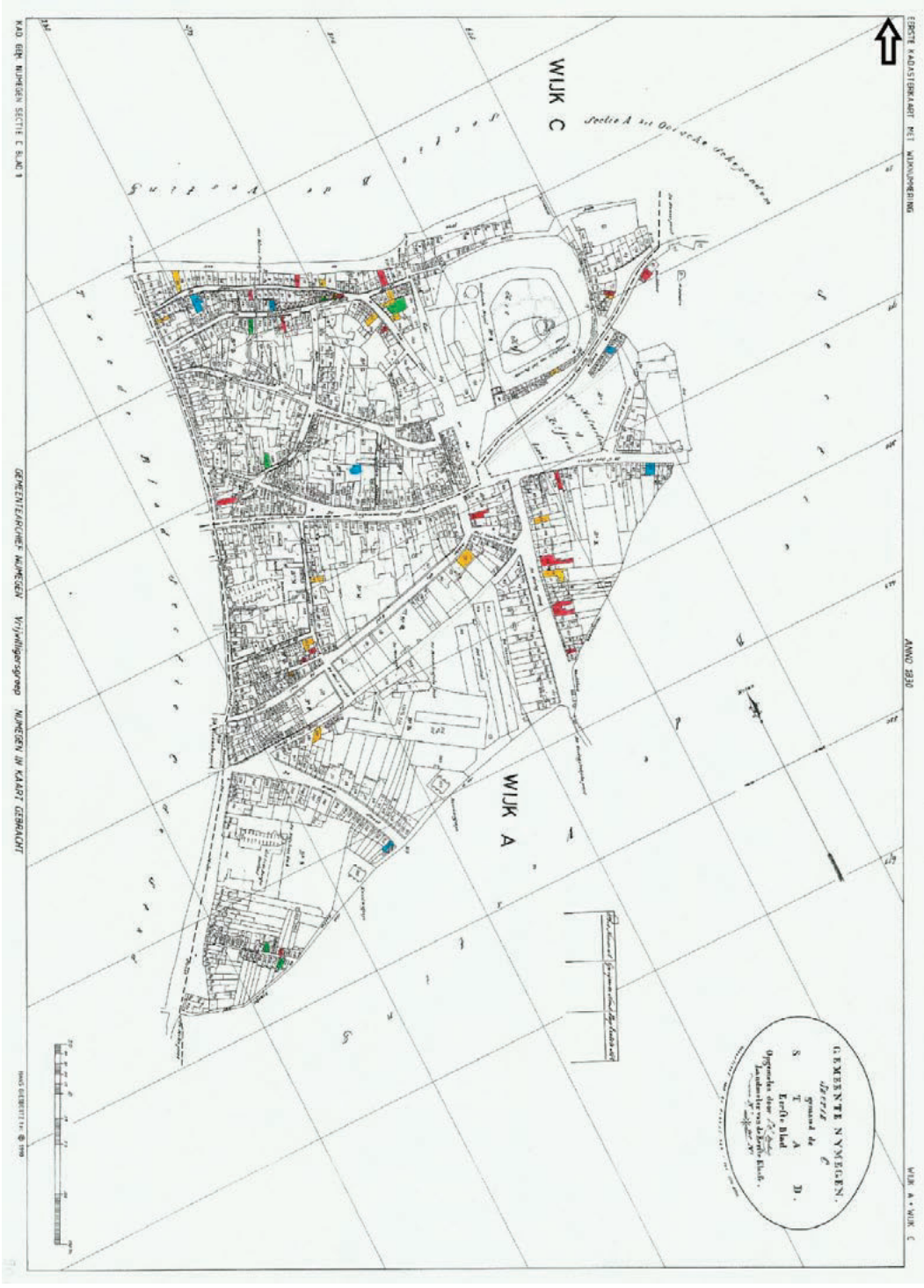
We have used the population registers to locate the swallows and repeaters in Nijmegen in 1827 and 1850, respectively. Not all of the mothers found in the birth registers actually lived in Nijmegen. Some of them only moved to the city to give birth to their children in the relative anonymity of an urban environment. Moreover, people from the nearby hamlets of Hatert, Neerbosch and Schependom declared their children to the registrar in Nijmegen, although there were separate population registers for these small townships as these areas were located outside of the city walls. For our first sample year, we have found 29 single mothers out of all 62 illegitimate children born that year. For our second sample year, we have located 62 single mothers out of a total of 78 children born out of wedlock in 1850, including one twin. For every mother, we have used both the population registers and the civil registers to find whether these women had given birth to one or more illegitimate children. Furthermore, we have omitted all women whom we could not identify with certainty in the registers. Figures 1 and 2 show all the swallows in green for 1827 and yellow for 1850, and the repeaters are depicted in blue for 1827 and red for 1850, respectively. For 1827, sixteen out of 29 single mothers actually had multiple illegitimate children. Of these sixteen women, nine eventually

married. The same applied to the thirteen swallows for our first sample year. As for our second sample year, there were 27 repeaters, of whom eleven eventually married. Of the 35 swallows, twenty married later in life. All in all, marriage seems to have remained the ultimate goal in life for both swallows and repeaters, who were aware that it would legitimize their child or children, as well as improving their socio-economic standing.

Maps 1 and 2 show that there seem to have been several clusters of single mothers within the city, which happen to have been located in the poorer parts of Nijmegen. In the western part of town two streets stand out: the Bloemerstraat and the Achter de Wal, located near the city walls. Multiple swallows and repeaters can be found near the military barracks near the Hezelpoort and the Waal, respectively. In the eastern part of the city we see four separate clusters. The first and smaller cluster can be found in the Vlaamse Gas, a narrow alleyway inhabited by the most impoverished people in the city. Swallows and repeaters also clustered in and near the Hertogsteeg, which was in close proximity to military barracks. The largest barracks were located between the Ziekerpoort and the Hertogsteegpoort. Two other barracks were located to the north-east, near the Valkhof area. The third cluster can be seen near the Lange Nieuwstraat, Korte Nieuwstraat, and Op den Grutberg, on the other side of the city barracks. The last cluster can be found in the Steenstraat, Strikstraat, Vleeshouwerstraat and Voerweg. These streets were located near the river and were notorious for their poverty, overcrowding and poor living conditions. Both the Steenstraat and Voerweg housed several taverns. Prostitutes supposedly worked in the areas surrounding the Voerweg and Vleeshouwerstraat, although many women were never officially registered as prostitutes. Even if single mothers did form a subculture of their own – of which only family reconstructions can deliver tangible proof – the clustering of both swallows and repeaters first and foremost shows the connection between the city's garrison and illegitimacy on the one hand, and the often extremely poor conditions single mothers had to live in on the other.



Map 1. Repeaters (green and yellow) and swallows (blue and red) in the western part of Nijmegen in 1827 and 1850, respectively. Collection of maps and city plans, KPB-III-39 Eerste kadasterkaart met wijknummering 1830 by L.C. Maehen, Regionaal Archief Nijmegen.



Map 2. Repeaters (green and yellow) and swallows (blue and red) in the eastern part of Nijmegen in 1827 and 1850. Collection of maps and city plans, KPB-III-40, Eerste kadasterkaart met wijknummering 1830 by L.C. Maehen, Regionaal Archief Nijmegen.

Just as was the case elsewhere in the Netherlands and in most other Western European societies, illegitimacy rose and fell in Nijmegen during the first half of the nineteenth century. A peak was reached in the early 1820s when slightly over 14% of all children were born out of wedlock. Compared to the national average, the proportion of births that occurred out of wedlock by the river Waal was high, but it remained far below the levels that have been observed for cities such as Vienna and Stockholm. In Nijmegen and the rest of the Netherlands, illegitimacy remained a marginal phenomenon that did not pose a threat to the Western European marriage pattern.

Earlier studies showed that illegitimacy was a predominantly lower-class phenomenon and it was associated with various dimensions of vulnerability. The analysis of the data on Nijmegen permits the assumption that women who gave birth to children out of wedlock were not the precursors of an early sexual revolution as Edward Shorter (1971) has suggested, nor did they form a clear sub-culture with strong deviating sexual norms (cf. Laslett, 1980). Instead, extra-marital sexuality seems to have been predominantly directed toward marriage, or at least the formation of a stable union. Pregnant brides were only slightly younger than non-pregnant brides, which suggests that they had postponed sexual activity until they had reached a marriageable age. This seems to apply even more so to single mothers, as the average age at first birth in our two sample years is slightly higher than that of pregnant brides. Moreover, illegitimacy and bridal pregnancies followed similar trends, which suggests that they were by and large two sides of the same coin. In times when marriage prospects improved, courtship intensified, sexual activity increased, and pre-marital conceptions became more widespread.

A reasonable proportion of couples engaging in pre-marital intercourse did eventually marry. However, others abandoned their partner or postponed marriage. Nevertheless, we also see a strong upward trend in legitimizations during the period under research. Whereas in the early 1810s less than 10% of all children born out of wedlock were eventually legitimized through marriage, about half of them were legitimized by the middle of the century. Although there may have been plenty of reasons why people decided to not proceed with or to postpone their marriage apart from financial motives, the occupational status of the groom seems to have been of key importance. Our analysis shows that a majority of the

known fathers of illegitimate children were (retired) garrison soldiers, of whom the large majority were prohibited by law from marrying. It seems that many of these soldiers chose to cohabit with their partners as a formal marriage was not a legal option to them. It is also very likely that the soldiers contributed to the rise in illegitimacy. Their numbers increased drastically in the 1820s and 1830s due to the state of war, followed by increasing levels of illegitimate births. As their numbers declined after 1839, illegitimacy did so as well.

But why did the other fathers refrain from marrying the mothers of their illegitimate children? Some may have lacked the financial means to do so as their labor contracts were not renewed; others may simply have abandoned their plans to marry. The fact that illegitimate conceptions peaked in September indicates that many of the illegitimate children in Nijmegen were conceived during the annual fair; this event likely offered young people an opportunity to engage in sexual activity with partners with whom they had no stable relationship. Moreover, these people may have been partners whom they themselves, or their family and wider social network, deemed unsuitable as spouses. It is plausible that the unmarried mothers who were abandoned due to a lack of love, commitment and / or money lacked the means and the social network to force the father of their child to marry them. Moreover, the begetter of the illegitimate child may have simply disappeared from the scene after violent sexual contact. Our search in the population registers for the locations of single mothers reveals that a considerable proportion of these women lived in the poorest parts of the city, which substantiates the intimate relationship between economic hardship and illegitimacy even further.

While we are able to sketch the rough contours of illegitimacy in Nijmegen in the early nineteenth century, further research is necessary to get a better founded picture of the causes and consequences of extra-marital fertility by the river Waal. In order to obtain a more comprehensive picture of the phenomenon, it would be sensible to reconstruct the life courses of single mothers and to systematically compare them with the life courses of other groups of women; women who followed other paths of marriage and family formation. It would also be highly interesting to dig into the life courses of the known fathers of illegitimate children and to compare the fathers who chose to marry their child's mother to those who chose not to.

Once life course data is gathered, multivariate analysis, such as event history analysis, and sequence analysis can be applied. In this way, it can

be investigated further why the lives of single mothers and their sexual partners deviated from the contemporary cultural life scripts regarding marriage and family formation (cf. Engelen, 2014). What factors increased the risk of becoming pregnant before marriage? What influenced the likelihood of a pregnancy ending in marriage compared to single motherhood? What kind of events during the life course increased the likelihood that a single mother ultimately married and, conversely, what factors prevented her from marrying? What happened to the known fathers who did not marry the mothers of their illegitimate children? Did they marry another woman within a short period of time? If the latter was the case, we can reject the idea that a lack of economic means prevented the marriage, unless they married well-off brides instead. This type of research can be supplemented by social network analysis in order to determine whether and how single mothers were related to each other, but it can also help to evaluate to what degree the role of the network influenced eventual outcomes in the family formation process.

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1. Civil Registry Nijmegen, *Registry of Births 1827*, record no. 522, Regionaal Archief Nijmegen.
2. In this paper, we use extra-marital fertility, births out of wedlock, births outside of matrimony, illegitimacy, and non-marital fertility interchangeably, all indicating births of children whose parents were not married at the time of birth.
3. http://wiewaswie.nl
4. http://studiezaal.nijmegen.nl.

[14]

HIDEKO MATSUO & KOEN MATTHIJS

Trends in secularization and marriage seasonality in the province of West Flanders, Belgium, in the long 19th century

PERSONAL CONFESSION: FRIENDSHIP AS AN ACADEMIC DRIVER

We would like to take this opportunity to discuss the context of our study, presented in this festschrift in honor of Theo Engelen. Throughout his academic career, the Leuven research group Family and Population Studies has always been in close and friendly contact with Theo Engelen. This took place in a context of respect, appreciation and, above all, enduring friendship. Among his extensive research in historical demography on Western Europe, Theo has studied marriage seasonality patterns in the provinces of the Netherlands during the nineteenth century (Engelen, 2017), and earlier on he also compared the seasonality of marriage and birth patterns between Lugang (Taiwan) and Nijmegen (the Netherlands) (Lin & Engelen, 2011). The former study on Dutch marriage seasonality provided a lot of inspiration for our current work in Flanders. The latter comparative Eurasian study has also done so, by challenging us to understand the mechanisms driving the seasonality of demographic behavior at an abstract level. Coincidentally, his work was itself presented in a festschrift (Lin & Engelen 2011). For these reasons, it is a great pleasure to present part of our work that builds further on Theo's research and expertise.

INTRODUCTION

The second half of the long 19th century is considered as a period of great societal change in Belgium. As in other European countries, this period is characterized by industrialization, transforming the economic activities

from the primary (e.g. farming and fishing) to the secondary and the tertiary sector. In contrast to the Walloon region (i.e. roughly the southern part of Belgium), where large-scale production of coal and steel took place, the Flemish countryside (roughly the northern part of Belgium) engaged in both proto-industrial (i.e. rural linen industry) and a large proportion of agricultural activities (Mendels, 1971; Vandenbroeke, 1996). As such, large socio-economic differences within and across regions emerged. The harvest failures of 1844-1845 hit the province of West Flanders badly, while the linen industry collapsed due to the severe economic competition caused by fierce industrialization in the province of East Flanders (e.g. Ghent and Aalst) and also in Great Britain (Musyck, 2007; Vanhaute & Van Molle, 2006; Vanneste, 1997). These structural crises promoted commuting by new means of transport (e.g. tram, train), and seasonal intra- and extra provincial mobility, contributing to the growth of cities (i.e. urbanization) in Flanders (Deschacht & Winter, 2015).

Along with these socio-economic changes, the 19th century was also a period of secularization. Secularization in Belgium is considered to have started in Wallonia in the early to mid-19th century, and then in the second half of the 19th century, roughly identical to the industrialization period, covering the cities of Flanders (Lesthaeghe, 1977). Secularization is defined as less involvement in religious rules and customs as a result of a breakdown of religious authority, and the decline of the significance of religious institutions and values (Dobbelaere, 2010). Through the use of indicators such as the occurrence of church marriage, the fulfilment of Sunday or Easter duties, the presence and/or absence of religious incantation in wills, as well as political preference in voting, the prevalence and the intensity of secularization can be tested (Lesthaeghe, 1989).

The socio-economic and cultural changes are reflected in the seasonal patterns of demographic behavior (Kussmaul, 1985), i.e. the occurrence and the timing of birth, marriage and death (e.g. Lam & Miron, 1996; Rau et al., 2017). Unlike birth and death outcomes, marriage behavior is strongly based on people's choice, determined by individual preferences, socially and economically (Wrigley & Schofield, 1981). Not only do the socio-economic conditions matter, but also religious forces, enforced by shared norms, attitudes, beliefs and local practices (Bachrach, 2014). They are influenced by networks of other individuals and groups, such as family members, including siblings and parents (Coale & Watkins, 1986).

The current study aims to examine secularization through marriage seasonality in the province of West Flanders (Belgium) in the long 19th

century. This research replicates the analyses of a previous empirical study on the arrondissement of Antwerp (Matsuo & Matthijs, 2018). The aforementioned research has studied both marriage and birth seasonality, also by orders (e.g. including remarriages, and first, second and higher birth orders), by applying DLA marriage and birth indexes to the Antwerp arrondissement in the long 19th century, using the Antwerp COR* database (Matthijs & Moreels, 2010). The purpose of the current study is threefold: firstly, to assess the presence and the evolution of church control versus secularization in West Flanders in the long 19th century, and to measure if these changes were reflected in the marriage index (i.e. assessing the incidence of marrying during Advent and Lent over time). Secondly, we assess if any of these changes are observed within the province across various areas. Thirdly, we explore determinants of marrying during Lent, Advent or Advent/Lent time.

BACKGROUND

Empirical historical demographic research provides ample evidence for the seasonality of marriage behavior. The favorite months to marry vary across regions: May, June and December in southern Sweden (Dribe & Van de Putte, 2012), May in the Netherlands (Engelen, 2017), November and February in northern and central Italy (Ruiu & Breschi, 2015). There are two explanations for this. The first relates to socio-economic determinants, mainly seasonal workload (Kussmaul, 1985; Wrigley & Schofield, 1981). Obviously, the seasonality of workload is associated with the type of economic activity (e.g. primary/secondary/tertiary), and the workload attached to the kinds of labor activities and occupations (e.g. professionals, servants, agricultural laborers, etc.). Wrigley & Schofield (1981) have differentiated these types of activities in England into arable and pastoral (e.g. sheep and cattle keeping activities) farming. For instance, the former had fewer tasks and enjoyed the fruits of their labor in autumn, whereas the latter had more free time in the period from April to June, and therefore people married more during spring and early summer. Seasonal workload is also related to the timing of the renewal of labor or smallholders' land lease contracts. These timings also differ across regions. In the Netherlands, contracts related to work or land leases were ended and renewed in May (Engelen, 2017). In northern and central Italy, St. Michael's Day (29 September) and St. Martin's Day (11 November) were the expiration

dates for rural agreements on sharecropping (Ruiu & Breschi, 2015). In southern Sweden, servants' and labor contracts were renewed at the beginning of November (Dribe & Van de Putte, 2012). The occupational status also matters, even when engaged in the same type of sector. Dribe & Van de Putte (2012) provide evidence of southern Sweden documenting the seasonality effects across occupational groups, in particular illustrating the differences between peasants on the one hand and landless and semi-landless agricultural laborers on the other hand. Peasants were more likely to marry in May-June and December, whereas the semi-landless married less in these months.

The religious restrictions relating to the periods of Lent and Advent are largely relevant for marriage behavior as festivities during these times of the year are discouraged and solemnization (i.e. the performance of ceremonies) is not generally performed in church. Even when ceremonies do occur, only a small-scale ceremony is performed, in order to comply with religious rules (Ruiu & Breschi, 2015). The level of religiosity differed across regions. Lesthaeghe (1989) studied the seasonality of marriages through monthly measures across provinces and arrondissements. The periods in which the restrictions relating to Lent and Advent are March and December, respectively. In their work examining marriages during Lent and Advent in the period 1750-1970, Lesthaeghe (1989) and Lopez-Gay (2013) showed large differences. According to their study, within West Flanders, a relatively higher value is observed for the Bruges and Ostend arrondissements, in comparison to the rest of the province. In 1841-1847, the indexes in these two arrondissements were in the range of 21.6-35.5, and slightly increased to 38.2-48.9 in 1881-1884, whereas the rest of the arrondissements increased from 10-21.5 in 1841-1847, to 16.0-38.1 in 1881-1884. In the last period, only the arrondissement of Veurne (another seacoast area) joined these two high-index arrondissements (i.e. Bruges and Ostend).

Matthijs & Van De Putte (2001) took the annually changing period of Lent into account when analyzing individual civil marriage records in the 19th century from Aalst (East Flanders), Leuven and Bierbeek (Flemish Brabant). They found differences across places where religious adherence continued for Aalst and Bierbeek, but less difference for Leuven, and concluded that these differences of location were related to several socio-economic characteristics, including size, the type of economic sector and occupation, the diversity of sectors, but also to cultural markers such as secularization.

HYPOTHESES

Three hypotheses guide our research. Firstly, we expect that the Lent and Advent index values for first marriages were relatively low during the early 19th century, given the high concentration of the primary economic sector and the dominant position of church institutions at that time. We examine whether these values slowly increased in the course of the 19th century, with the presence and diffusion of (proto-)industrialization and lessening religious influence (Lesthaeghe, 1977; 1989; Lesthaeghe & Lopez-Gay, 2013; Vandenbroeke, 1996). Next, we expect that the DLA index was higher (closer to 1) for Advent than for Lent, indicating that Advent was generally less respected (Matthijs & Van De Putte, 2001; Reher & Gimeno, 2006; Ruiu & Breschi, 2015). We consider that Advent time coincides with winter periods, when more free time and resources are available for the subgroup of the population engaged in the primary sector (Dribe & Van de Putte, 2012; Engelen, 2017; Wrigley & Schofield, 1981). Also, the religious rules for Advent are considered to be more moderate than those for Lent. Lastly, we assume that the index values are different across localities. The geographical location of the marriage will serve as a proxy for socio-economic and cultural characteristics distinguishing between rural and urban municipalities and between seacoast and inland areas. We expect that the values of the seacoast and urban areas are higher than the inland and rural areas, given the various seasonal labor activities and the differences in the level of religious adherence. For instance, in seacoast areas, inhabitants were faced with less fertile land (i.e. sandy soil areas), forcing the population to engage in other labor activities than farming (e.g. fishing). Moreover, these areas are expected to be much more subject to national and international contacts due to nascent tourism and harbor-related activities, possibly leading to more 'open', secularized value orientations.

DATA, METHODS AND MEASURES

The multi-source historical demographic sample of the province of West Flanders consists of information from individual civil and parish register records of births, marriages, and deaths for the period 1795 to 1920. A subsample of civil registration marriage records (N=414,277) is used from all 241 municipalities in the data set. The sub-sample is restricted to first marriages in the period 1800-1913. This means it excludes the First World War

(1914-1918) period in order to remove any potential temporal effects on marriage behavior. Consequently, the final sub-sample consists of 384,491 units.

We highlight three methodological issues. In the first place, the DLA index is calculated on the basis of Christmas and varying Easter dates, in order to take the exact dates of Lent and Advent into account (Ruggeri, 2016). When these values are small, religious rules are respected, whereas they are high when the rules are complied with less (or not at all). This index is more precise than the frequently used monthly measures (e.g. Dribe & Van de Putte, 2012; Engelen, 2017; Lesthaeghe, 1989; Lesthaeghe & Lopez-Gay, 2013). Secondly, the geographical location of the marriage event will serve as a proxy of socio-economic and cultural characteristics, using municipalities in inland versus seacoast areas on the one hand, and rural communes versus cities on the other. Thirdly, binomial logistic regression models are applied to examine determinants of the occurrence of first marriages during Advent and / or Lent. The likelihoods of marriage during the closed religious periods are examined by controlling for three types of geographical locations and the corresponding historical period. SAS statistical software is used to prepare and analyze the data set (Aelvoet et al, 2016).

First, we will focus on a number of sample characteristics: temporal (i.e. historical period) and geographical information. For the historical period, we distinguish between three periods, dividing the 120 years into periods of roughly 40 years: (I) 1800-1839; (II) 1840-1879; and (III) 1880-1913. These divisions are by and large justified given the fact that the fertility transition started around 1870 in Belgium, although large regional differences do exist. Lesthaeghe (1977) documents that, together with East Flanders and Limburg, West Flanders experienced a late fertility decline, i.e. around 1880. This means that the first two periods represent the pre-transition period, and the third period covers the transitional period. There are three types of geographical information. Firstly, there are eight arrondissements: Bruges, Diksmuide, Kortrijk, Ostend, Roeselare, Tielt, Veurne, and Ypres. Secondly, the location of marriage is classified into two areas: on the one hand seacoast and inland municipalities, on the other hand cities and rural communes. Determining seacoast areas is restricted to municipalities that strictly lie along the seacoast areas where they are considered to have rather homogeneous socio-economic and cultural characteristics, in comparison to polder ones (Beusen & Rombaut, 1998; Westtoer, 2018). Seacoast areas had non-cultivating land (i.e. sandy soil

areas) and a high proportion of the population engaged in non-farming activities, such as fishing. Categories of cities are chosen taking into account the historical context of cities (Beusen & Rombaut, 1998; List of municipalities in Flanders 2018[1]). These decisions resulted in the selection of 28 seacoast municipalities (e.g. Ostend, Nieuwpoort, etc.) and 14 cities (e.g. Bruges, Ostend, etc.).

RESULTS

Table 1 provides the sample characteristics: the timing of marriages, and geographical and temporal information. Following this table, three figures are presented. Figure 1 presents information for all municipalities. Figure 2 relates to the Lent and Advent indexes in seacoast and inland areas respectively, and illustrates the DLA indexes between seacoast and inland areas.[2] Figure 3 presents the DLA indexes between cities and rural communes. In order to illustrate these trends, values in figures are expressed in two terms: observed and trend lines (polynomial).

DESCRIPTIVE STATISTICS OF THE STUDY SAMPLE

Approximately 4% of the marriages took place during the periods of Advent and Lent. The proportion is higher for Lent (2.5%) than for Advent (1.8%). Three types of geographical characteristics are distinguished. Within all municipalities, approximately 9% are located in seacoast areas, 30% in cities. Our sub-sample covers eight arrondissements: 21% of the municipalities are observed in the arrondissement of Bruges; and the rest are Kortrijk (20%), Ypres (15%), and Tielt (11%); the remaining four arrondissements are below 10% (Diksmuide 8%, Ostend 8%, Roeselare 9%, Veurne 9%). The entire observation period of 113 years (1800-1913) is divided into three periods: 1800-1839 (35%), 1840-1879 (39%) and 1880-1913 (26%).

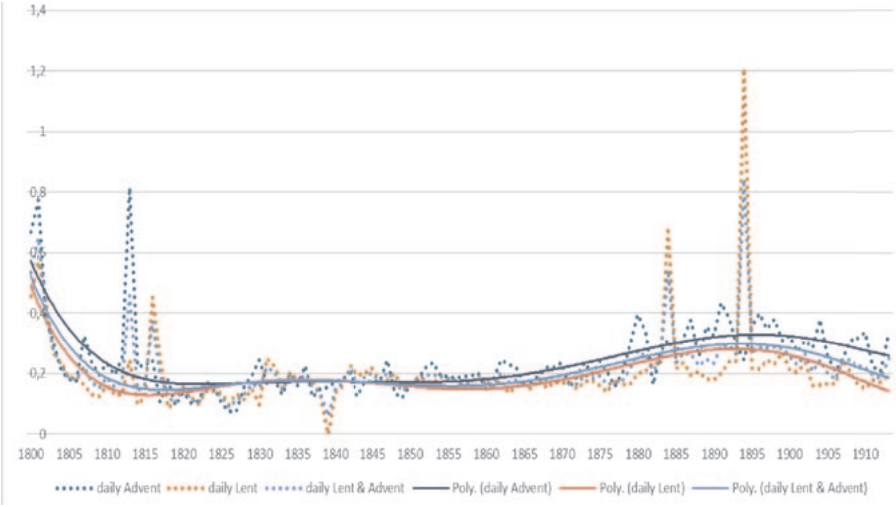
Figure 1 shows that DLA indexes are generally stable throughout the observation period, and only gradually shift upwards from 1870 until the end of the 19th century. However, rather than increasing, DLA indexes decline thereafter at the end of the observation period (the early 20th century). This trend is subject to further investigation, but indicates that secularization did not achieve full force in this period. By distinguishing DLA indexes between Lent and Advent indexes, the differences between

Table 1: Sample characteristics, province of West Flanders, 1800-1913 (n=384,491)

		%
Timing of marriages	Lent	2.48
	Advent	1.80
	Lent or Advent	4.29
Location of municipalities	Sea-coast	8.82
Urban areas	Cities	30.31
Arrondissements	Bruges	20.86
	Diksmuide	7.89
	Kortrijk	19.75
	Ostend	8.26
	Roeselare	9.11
	Tielt	10.65
	Veurne	8.95
	Ypres	14.53
Historical periods	1800-1839	35.27
	1840-1879	38.76
	1880-1913	25.97

the two are clearly identified. As expected, the values of both Advent and Lent are rather stable and identical up to the mid-19th century, while differences start to emerge from 1870 onwards. This period roughly coincides with the take-off of the fertility transition. More specifically, the indexes of Lent slightly increase, but remain roughly around the same level thereafter, whereas the Advent values increase substantially from 1880 onwards, and remain higher than the Lent ones until the end of the observation period. Also in line with our expectation, Figure 2 shows that the DLA indexes in seacoast municipalities are consistently higher than in inland ones as of the beginning of the 19th century. The values, however, decrease in the early 20th century. Within each area (i.e. seacoast and inland areas), differences between the Lent and Advent indexes already exist in the early 19th century. These differences are more visible in seacoast areas, but less so in inland areas. Examining these values within the inland areas, the differences between Advent and Lent start to emerge from roughly the 1880s, when the Advent index values increase, reaching a maximum of 0.3. The relatively higher index values of seacoast areas may indicate a higher degree of secularization to some extent in these areas (i.e. because

Figure 1: Daily Lent, Advent, and Lent and Advent indexes for first marriages, 1800-1913 in the province of West Flanders



Lent is not that high), in comparison with the inland. This is because seacoast areas are less engaged in farming activities, and are expected to be much more exposed to non-Catholic values through fishing, tourism and harbor-related activities. Furthermore, in line with our expectation, DLA indexes in cities are consistently higher than in rural (non-city) areas where variances are observed since the early 19th century (Figure 3). The Lent and Advent indexes within cities or rural (non-city) areas are distinctively different for cities but less for rural areas. The higher values in cities indicate that sub-populations were not exclusively engaged in the primary sector, but were also likely to be less religious. The opposite is the case in rural areas. Lastly, regarding the DLA indexes across arrondissements, clear geographical differences are found from the early 19th century on with the representation of high indexes for Bruges in the first place, and then Ostend. The lagging trend of Veurne, another seacoast arrondissement, from the 1860s onwards is also clear. These findings regarding the trends of the Lent and Advent indexes are in line with those reported by Lesthaeghe (1977) and Lesthaeghe & Lopez-Gay (2013).

Figure 2: Daily Lent and Advent indexes for first marriages in 1800-1913 in the province of West Flanders for seacoast vs. inland areas

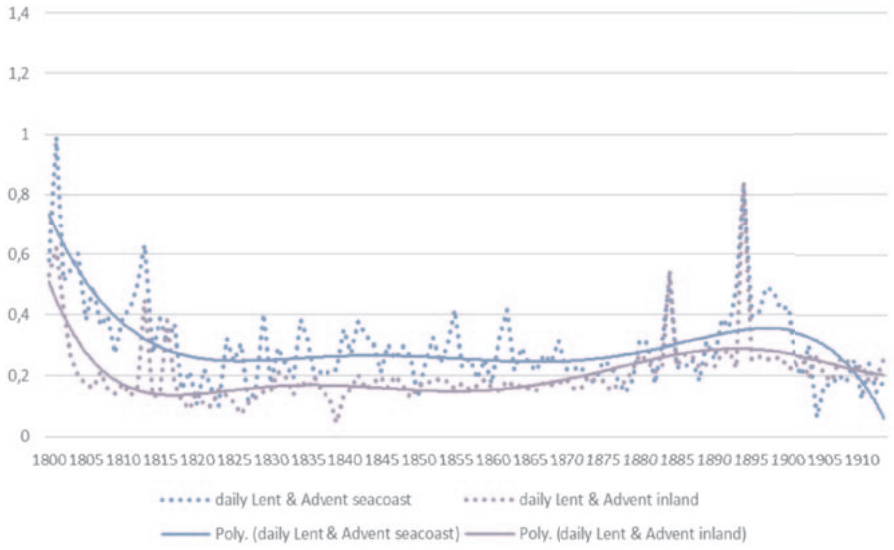
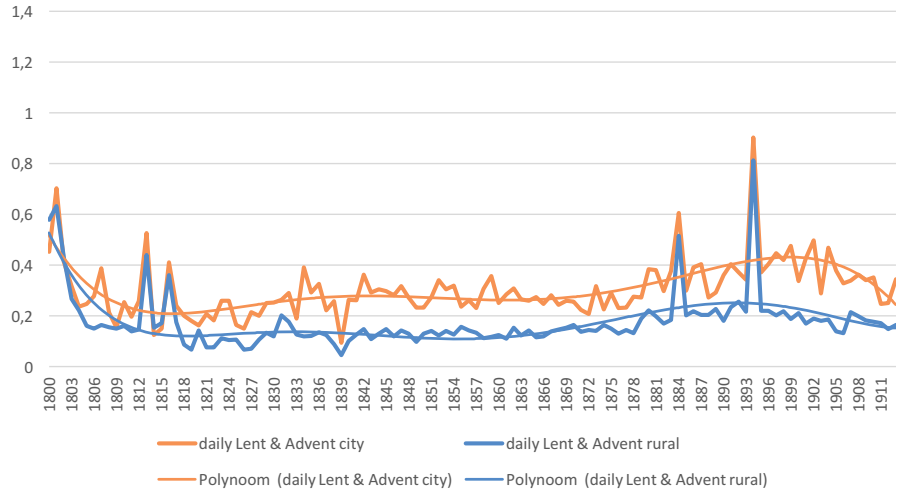


Figure 3: Daily Lent and Advent indexes for first marriages 1800-1913 in the province of West Flanders, cities vs. rural communes



The results regarding the effects of geographical and temporal variables are in line with our hypotheses (Table 2). The likelihood of first marriages taking place in Lent and / or Advent (fourth column under Lent and Advent) throughout the 19th century [*Odds Ratios* (*ORs):* 1.346) increases substantially in Bruges (*ORs:* 2.219, Ostend (*ORs:* 2.261) and to some extent in Veurne (*ORs:* 1.789), as well as in cities (*ORs:* 1.677). The high odds ratios of the latest historical period (1880-1913) refer to the consistent increase throughout the 19th century even though we find a decline in the early 20th century in the previous descriptive statistics. Contrary to what is expected, the effects of 1840-1879 (in comparison to 1800-1839) (*ORs*: 0.866) and seacoast areas (*ORs*: 1.059) are limited. Some differences exist between the Advent and Lent indexes. On the one hand, the likelihood of marriage in Advent (third column) increases substantially for Ostend (*ORs:* 2.654), Bruges (*ORs:* 2.385), and Veurne (*ORs:* 1.979), in addition to covariates including cities (*OR:* 1.732) and the late historical period 1880-1913 (*ORs:* 1.295). The effect of seacoast areas is somewhat higher (*ORs:* 1.197) than in the previous model. On the other hand, the likelihood of marrying during Lent (second column) also increases for very similar covariates to the ones for the model of Advent, although some differences are detected. They show relatively lower likelihoods in all arrondissements and cities, but higher likelihoods in the later historical period (*ORs:* 1.365). Also, the effect of seacoast areas is not significant.

The analyses based on the descriptive statistics and the multivariate models are in line with our hypotheses. In the first place, the Catholic religious rules regarding the dates of first marriages during the restricted periods are generally stable throughout the 19th century and increase (i.e. become less complied with) from the 1870s until the end of the 19th century, but decrease again in the early 20th century. This suggest that secularization was slowly becoming more prevalent throughout the 19th century. This process does not appear to have continued in the early 20th century. As expected, religious rules are more strictly obeyed for Lent than for Advent. Also, our results illustrate geographical effects: the DLA indexes are higher in cities and seacoast arrondissements. These differences are subject to actual seasonal labor activities and the level of religious adherence. Areas that are exclusively engaged in the primary sector are likely to have more free time during Advent (winter), and find it convenient to

Table 2. Model results: effects of geographical and period characteristics on first marriages in Lent, Advent or Advent/Lent (n=384,491)

		Lent		Advent		Lent & Advent	
		Odds ratio	SE (p-value)	Odds ratio	SE (p-value)	Odds ratio	SE (p-value)
Intercept		0.026	0.020* **	0.020	0.022***	0.047	0.015***
Location of municipalities							
Inland (ref)							
	Seacoast	0.954	0.022	1.197	0.024**	1.059	0.016^
Urban areas							
Rural (ref)							
	Cities	1.599	0.011***	1.732	0.013***	1.677	0.008***
Arrondissements							
Roeselare (ref)							
	Bruges	2.064	0.021***	2.385	0.025***	2.219	0.016***
	Diksmuide	1.430	0.038	1.823	0.045	1.588	0.029
	Kortrijk	1.419	0.025^	1.606	0.030)**	1.498	0.020***
	Ostend	1.995	0.039***	2.654	0.043***	2.261	0.029***
	Tielt	1.330	0.034**	1.732	0.039	1.489	0.026**
	Veurne	1.650	0.033**	1.979	0.039*	1.789	0.025***
	Ypres	1.320	0.029***	1.720	0.033	1.477	0.022***
Historical periods							
1800-1839 (ref)							
	1840-1879	0.906	0.01***	0.820	0.017***	0.866	0.011***
	1880-1913	1.365	0.015***	1.295	0.017***	1.346	0.011***
N		384,491		384,491		384,491	
Nagelkerke R^2		0.018		0.022		0.025	

***p<.0001; **p<.01; *p<.05; ^p<.1.

marry during this period. In each locality, Advent indexes are consistently higher than Lent ones, illustrating that the Advent prohibition was increasingly less complied with in the 19th century, while this was not the case for Lent. The fact that seacoast effects on likelihood of Lent are non-significant, and that their Lent index values in the descriptive statistics are relatively low, may suggest that religious control still prevailed to some extent. This may demonstrate the continuing dominant position of church institutions. The cultural effects, such as additional proxy measures including witness information (e.g. number, age, type of relationship to bride/groom) in the analysis can be extremely insightful. We expect that, together with DLA indexes, these additional measures can offer more explanation for the secularizing trends in marriage behavior during the long 19th century. In order to fulfil this requirement, ensuring the quality of such information will be fundamental.

Overall, the results show reduced compliance with religious rules in the course of the long 19th century in West Flanders, illustrating slightly increasing levels of secularization. These results are in line with the hypotheses. In general, there is a higher level of compliance with the rules with until the third quarter of the 19th century, and more for Lent than for Advent. Another feature is related to geographical differences. By operationalizing the geographical characteristics of the timing of first marriages through three proxies (i.e. arrondissements, urban/rural and seacoast/inland areas), we find evidence for non-compliance of cities and specific arrondissements, such as Bruges and Ostend. Ostend was categorized as a city and as a seacoast municipality. Better compliance for Lent than Advent is verified through limited seacoast effects. We find seacoast effects on the combined Lent and Advent likelihood on the one hand, and the Advent likelihood on the other. While this is interesting, no effects for Lent likelihood are present. Finally, we find upward trends in the late historical period (1880-1913), but downward trends during the pre-transitional period (1840-1879) in comparison to the first half of the 19th century.

Our findings are in line with the results of studies relating to other regions. In the first place, the increasing DLA indexes throughout the 19th century are also identified in another study on the Antwerp arrondissement (Matsuo & Matthijs, 2018), even though these values are higher for Antwerp. Secondly, while the general increase was identified throughout the 19th century, both the West Flanders and Antwerp studies identify the declining DLA values at the beginning of the 20th century, showing stagnating secularization trends. Likewise, regarding the geographical differences of these values, our findings are in line with the research of Lesthaeghe & Lopez-Gay (2013). For the province of West Flanders, they have also found the relatively early and high value of indexes in the seacoast arrondissements, even though they work with monthly values on the combined periods of Lent and Advent. The geographical effects of cities on these indexes are also verified, which is in line with the work of Matthijs & Van de Putte (2001). Furthermore, the fact that the marriage prohibition during Lent is more closely adhered to than that during Advent is in line with studies on other countries, such as Italy (Ruiu & Breschi, 2015) and the Netherlands (Engelen, 2017). The latter findings provide clear evidence for less religious adherence among the higher social classes. They follow the rules for Lent more than, but those for Advent less than, other social

classes. This provides important insights into the diffusion of demographic behavior from high to low socio-economic status.

The results provide a first overview on marriage seasonality trends in the Belgian province of West Flanders, examining temporal and geographical effects. Building on this analysis, an extended study might take into account a number of features. These include additional individual-based socio-economic and cultural characteristics: occupation, information relating to marriage witnesses, the presence of signatures on the marriage certificate, etc. Such scope of analysis can also be tested to higher order marriages, as a result of widowhood or divorce, illustrating the varying influence of secularization on different types of marriage. Furthermore, a replication of this study can be performed in other parts of the province and / or other provinces in Belgium, extending this analysis to the late 20th century.

Refining indicators to identify secularization trends at the individual level is a way to continue this line of research. This can substantially contribute to the research into seasonality, since the use of extensive measures can offer substantial insights into the interplay of socio-economic and cultural effects on demographic behavior. Even though secularization is a difficult concept to measure, the role it plays in demographic behavior is crucial and must therefore be well understood. In this context, starting with measures of marriage witness information and illegitimacy can offer new insights on long-term trends in secularization.

A FINAL CODA

We were extremely inspired by the work of Theo, not only on his seasonality research, but also on a wide range of topics, covering marriage and fertility behaviors in the Netherlands in particular and in Western Europe in general. Not only the Dutch experience, but also his pioneering work on investigating seasonality trends on the Eurasian level (Engelen & Lin, 2011) offers new opportunities to identify universal and context-specific factors to the seasonality of demographic behavior. Building on his work, for instance, revisiting the Malthusian framework (i.e. positive vs. preventive checks) in our analysis and interpretation, encourages us to work on seasonality issues in an integrated manner. This holistic approach requires an understanding of the interplay between demographic events, such as birth, marriage, death and migration behavior, in relation to seasonality, exactly the field in which Theo is currently working.

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[15]

FRANS VAN POPPEL, PETER EKAMPER
& KEES MANDEMAKERS

Season of birth and early childhood mortality: a review of the debate and a case study for the Netherlands, 1812-1912

PRELUDE

Historically, all components of demography – migration, fertility, nuptiality and mortality – were strongly affected by the seasons of the year. Religious prescriptions, weather conditions, the production cycle in agriculture and other sectors of the economy, the availability of food, all had an effect on the propensity of people to marry, to reproduce, to leave their place of living, and to die. Long-term changes in these active forces may have altered this seasonal patterning, but seasonality is still clearly visible in most demographic indicators. An enormous number of mostly local studies have become available on marriage, birth, and death seasonality. What has been lacking until now is a study in which these different demographic processes are analyzed within a common framework. Theo Engelen's new project 'The Rhythm of Life' is intended to do just that. Theo has, in his long career, worked on a variety of demographic developments and has shown a great sensitivity for the role that economic and cultural forces play in determining the outcome of these developments. He is therefore the right person to offer us a comprehensive framework for the study of the relationship between the passing of the seasons and demographic processes. The four seasons of the year are often used as an allegory of the human life course and we hope for a long harvesting season for Theo.

In the Hippocratic Corpus, the collection of ancient Greek medical works that bears the name of the ´father of medicine´, many references can be found to the marked fluctuations over the course of a year in the incidence of diseases. In the *Aphorisms*, for example, it is said: 'The changes of the seasons are especially liable to beget diseases, as are great changes from heat to cold, or cold to heat in any season. Other changes in the weather have similarly severe effects' (Dong, 2011; Langholf, 1990).

The earliest studies of the seasonal patterning of deaths were clearly inspired by the classical Hippocratic way of thinking, with its emphasis on the importance of the observation of diseases. In the second half of the 18th century, a popularized Enlightenment started to act as an innovative force in European societies. In the medical sciences, fatalism gave way to a belief that pathogenic factors could be prevented or eliminated, and disease was no longer regarded as an individual phenomenon but rather as a collective one, influenced by natural and social causes (Huisman, 1997). This natural process could be understood by studying its effects. By collecting mortality data over as long a period as possible and combining these with meteorological data, and by making cross-regional comparisons, local descriptions of specific diseases could ultimately lead to the formulation of general theories and to universal knowledge.

Nineteenth-century statisticians and medical doctors all over Europe stimulated their national statistical offices to collect data on seasonal patterns in mortality. In particular, the influence of the season on infant mortality was widely studied (Breschi & Livi-Bacci, 1997). Historical demographers and social historians have used these data for a variety of reasons. Seasonal patterns in mortality have been used as proxy information on the role of specific causes of death (Cheney, 1984), as a source of indirect information on how societies coped with changes in the environment (Galloway, 1994), while differences in the effects of the season on mortality by social class were studied to give clues on the conditions – food, shelter, clothing – under which these groups lived (Bengtsson, Campbell, & Lee, 2004). Last but not least, these data might provide us with information on the implications that the moment of conception had for a person's health and his or her likelihood of survival (Doblhammer & Vaupel, 2001; Reher & Sanz Gimeno, 2006).

A common approach to investigating the seasonality of mortality is the examination of monthly fluctuations in the published number of deaths

by month of death. A difficulty with this approach in studying infant and child mortality is created by the fact that the monthly number of deaths is influenced by monthly variations in the number of births. Since a high proportion of infant deaths occur within a few weeks of birth, the influence of monthly birth fluctuations on monthly fluctuations in infant and child deaths can be substantial (Knodel, 1988). For some countries in Europe, data have been published for the nineteenth century combining age at death in months with the month of death and by an ingenious procedure these have been used to analyze the month of birth as a risk factor for infant mortality (Breschi & Livi-Bacci, 1994; Breschi & Livi-Bacci, 1986; Vilquin, 1978). It turned out that in the Netherlands (during the period 1860-69) and Belgium, the season of birth had very little influence on the level of mortality in the first year of life (Breschi & Livi-Bacci, 1997).

The above-mentioned data could only *approximate* the month of birth of the deceased and this approximation only made sense for the first six months of birth. Seasonal fluctuations in mortality after that age and even in the second year of life might be present as well. For example, in the second summer of a child's life, it might also be confronted with high risks of infection. Also, a radical change in feeding habits, with weaning sometimes taking place after the first birthday, might be related to heightened seasonal mortality. A more rigorous approach is only possible by using individual-level data with exact dates of birth and dates of death, in combination with information on possible relevant characteristics of the child and his or her family.

A problem with studies in this field is that women who give birth in different seasons might have different characteristics. For example, as marriages have a strong seasonal pattern, and many first-born children are conceived shortly after marriage, there will be strong seasonal pattern of births according to parity. However, the social class, age and marital status of mothers may also vary over the year, with (for example) women from a particular social stratum being more likely to give birth at one season than at another, and these fluctuations might explain the relationship between season of birth and mortality. This selection issue can be dealt with by including maternal characteristics and / or performing a within-mother analysis.

We will analyze here the seasonal patterning of death during the first two years of life by using individual-level data on births and deaths. Seasonal patterns will be studied over a time period of more than a century

and for three Dutch provinces with strongly differing levels of infant and child mortality. We have used multivariate proportional hazard models to measure the impact of the season of birth and region, social class, and urban-rural residence on mortality risks of infants and children.

We will start with a summary of recent research on seasonal mortality in (historical) demography. Then we will briefly describe how, from the eighteenth century onwards, the seasonal variation in mortality attracted the interest of Dutch medical men and statisticians. We will present the dataset that we use to study the long-term development and the regional and social variation in seasonal mortality patterning.

STUDYING SEASONAL PATTERNS OF MORTALITY

Historical seasonal patterns of mortality have been studied for a wide variety of reasons. As a discrete topic, it was put on the research agenda by Eric Vilquin (1978). Vilquin estimated for Belgium in the period 1841-1843, on the basis of the number of deaths by month of death and age at death in months, the mortality risk by month of birth and age in months. He observed two excess mortality seasons, the winter and summer that each month-of-birth generation had to go through. For both these excess seasons there was a specific group of ages that was more vulnerable than any other group. Winter excess mortality, for example, was higher among infants aged between five and eleven months, whereas summer mortality affected in particular infants aged between one and five months. Thus, each month-of-birth generation was confronted with a different mortality pattern in its first year of life. Vilquin suggested that selection effects might have played a role: the fact that a particular excess mortality season had only limited effects on a given generation could have been due to the fact that this generation had already undergone excessive mortality a few months earlier during a previous excess mortality season, so that only the most robust members of this generation were still alive.

In the footsteps of Vilquin, Breschi & Livi-Bacci (1986) studied for Italy and various other countries the nineteenth-century seasonal pattern of infant mortality. Infants born in winter had by far the highest death risks, in particular during the first month of life, and this pattern did not change fundamentally until 1956. Not only were these infants exposed to high risks in the first month of life, but they also had to deal with the high summer risks at the age of around six months. Large regional differences

in the seasonal pattern were observed, in particular for the first month of life for infants born in the winter. In regions where the winter temperatures were lower, the effects of being born in winter were much stronger than elsewhere. Various factors such as housing, heating methods, and the protection against the cold provided to the infant could have amplified the effect of the winter cold. Interestingly, in the second year of life an upsurge in death risks was observed for children born in June-August. These children were between 12 and 14 months old during this period. A large part of this group had already been weaned and were therefore more vulnerable to intestinal infections (Breschi & Livi-Bacci, 1986). In a later article, Breschi & Livi-Bacci (1997) analyzed mortality data by age at death in months and month of birth for the Netherlands, Russia and Switzerland in the period 1828-1888. In the Netherlands and Belgium, the season of birth had very little influence on mortality in the first year of life. In Italy, Switzerland and Russia, however, the differences between seasons of birth were very large. In the first days and weeks of life, children born in the winter were highly at risk of respiratory infections, a risk that could be reduced by adequate clothing, heating and less exposure to infections. During the warm season children were at risk of contracting infections of the digestive tract, but this risk varied according to the age of the child in summer. The influence of age was partly dependent on the breastfeeding status of the child: whether or not it was breastfed, and the length of the breastfeeding period. This was particularly relevant when the child entered its second summer period. The model found in the Netherlands, with a flat pattern of mortality in the first month of life over the twelve months of birth, pointed to good care of children in winter, even though the Dutch winters were considered harsher than those of Italy. In Russia, a very high peak in the summer was observed, which could be explained by the high agricultural workload; the high participation of females in peak summer activities, often away from home, caused early weaning or irregular breastfeeding of children and a lesser degree of care and protection. For the Netherlands it turned out that the winter-born infants ran higher risks at ages 5-7 months, that is during June, July and August. Children born in the spring ran increased risks in the same months, when they were 3-4 months old. Children born in the summer had slightly increased risks at ages 1-2 months, corresponding with September and October. Children born in the fall were the luckiest ones (Breschi & Livi-Bacci, 1994; 1997).

Knodel used micro-level data from 14 German village populations during the eighteenth and nineteenth centuries to calculate risks of dying be-

tween two exact ages in months by month of birth and compared these seasonal risks with the average value over the year. He observed a generally higher mortality risk during late winter and during the late summer months. Over time, there was an increase in the relative summer excess of neonatal and post-neonatal mortality, in particular during the second half of the nineteenth century. He related this to a shift toward less breastfeeding and / or increased supplemental feeding. In regions where breastfeeding was dominant, a summer peak in neonatal and post-neonatal mortality was lacking. In Bavaria, where most infants were not breastfed at all during any season, infant mortality was high throughout the year as the protective effect of breastfeeding was lacking in all seasons. The excess of infant mortality during the late summer and early fall harvesting months was limited to infants in the 1-5 months range. In contrast to the normal pattern of weaning at close to six months of age, during this period infants were weaned considerably earlier. In addition to this, contaminated food was more likely to be fatal among young infants than older ones (Knodel, 1983).

The seasonality of infant deaths can provide clues to the relative importance of various causes of deaths. Huck (1997) showed that during the nineteenth century the seasonal pattern of infant deaths in the UK changed markedly, from a pattern characterized by a winter peak and a summer trough to one with a peak in summer and average levels in winter. Health authorities pointed to the growth of pathogenic microbes and increased numbers of flies facilitating contamination as responsible factors. Huck suggested that the incidence and duration of breastfeeding had fallen during the nineteenth century and that the supplementation of breast milk with cow's milk had become more common. This could have decreased the protection against summer diarrhea and might have been at the heart of the changes in the seasonal mortality pattern of infants.

Reher & Sanz Gimeno (2006), using data for the Spanish city of Aranjuez in the years 1871-1970, showed that children born in late autumn and winter were at a distinct disadvantage whereas those born during late spring and summer were well-positioned for survival over the first five years of life. They observed a strong heterogeneity in the effect of the season on infancy mortality, depending on the child's exact age during different seasons of the year and on the type of infant feeding that was provided. Children in Spain tended to be breastfed almost exclusively during the first couple of months of life and weaning tended to take place after six months. The interplay between the date of entry into a dangerous period

of infancy – dangerous because of the weather, teething or changes in feeding – and the age at entry caused a large amount of heterogeneity in mortality in the first year of life. Babies born in the winter and spring had the greatest risk of dying at the age at which they entered the summer season with its high diarrhea risk. Important risks after the first year of life were observed for babies born April-June, who survived their first summer thanks to the protection of their mother's milk but who did not have this protection when they reached their second summer. Infants most affected by intestinal diseases were those born during the winter who reached their first summer when they were being weaned and when teething had begun. For respiratory infections, the younger a child was, the greater the likelihood of death, implying greater risks for those born during the winter months.

Derosas (2009) also tried to explain long-term trends in infant mortality in nineteenth-century Venice by referring to the interplay between a seasonal pattern of mortality, characterized by high neonatal mortality among children born in the winter, and changes in maternal nutrition, in particular during late pregnancy. Maternal malnutrition, measured by prices of wheat and corn during the last three months of pregnancy, was assumed to increase the proportion of underweight children. These children were more exposed to reduced body temperature, because they lost warmth faster and also had less suckling ability; this could have increased their death risks in the first month of life.

In most studies, researchers linked changing seasonal mortality patterns to changes in breastfeeding patterns. Cheney (1984) showed that, in Philadelphia in the years 1865-1920, excess summer mortality in the first year of life decreased from around 1910 and almost disappeared by 1920. The seasonal pattern was associated with diarrheal diseases, sometimes referred to as weaning diarrhea. The shortening of the period of breastfeeding meant earlier weaning, which in turn implied that more and more infants were encountering weaning in the first rather than in the second year of life. Medical doctors advised that a child should be breastfed until after its second summer and never weaned just before or during the summer. A large decline in the summer peak in infant mortality was visible in 1900-1920, due to the improvement of the quality and purity of the milk supply and better informed childcare and feeding practices.

Oris, Derosas, & Breschi (2004) focused in addition to breastfeeding on the role that institutions and policies, housing conditions and food hygiene played in the effect of season on mortality. They compared five nine-

teenth-century communities in Italy, Sweden and Belgium and showed that the effect of the seasons was different for the various age groups and communities. In the communities in temperate regions, such as those in Belgium and even more so those in Italy, winter had an immediate effect at the beginning of life. Factors contributing to the winter peak for neonatal deaths were the inadequate heating systems of houses and the exposure of children to cold during the baptism ceremony. In Belgium and Sweden the winter effect also remained marked after the first six months. The authors connected this with changes in clothing and the exposure to cold when the babies gradually left the cradle. In the poor rural societies of Belgium and Sweden, children aged six months or older suffered not only during winter, but also during spring. Food supplies were most scarce in this period. Food availability affected not only weaned children but also, indirectly, breastfed children as mothers died at higher rates when food became more expensive, thereby exposing their children to higher death risks as well.

A different strand of research has focused on the association between seasonal variations in early life conditions, such as infectious burdens and nutritional levels, and later adult health status. In a very influential paper, Doblhammer & Vaupel (2001) argued that month of birth may be an indicator for environmental factors linked to the season of birth, and that month of birth was related to remaining life expectancy at age 50. People born in autumn (October – December) in Northern Hemisphere countries lived longer than those born in spring. Seasonal differences in the composition of births might have been at the heart of these mortality differences. Doblhammer & Vaupel (2001) tested (albeit in a rather crude way) whether differences in social composition of births might have been responsible for the observed effect, but did not find such an effect. They suggested that higher birth weights, caused by better nutritional status of the mother during pregnancy, and by seasonal differences in the incidence of infectious diseases of the mother during the third trimester of pregnancy, might have played a role. Mothers who gave birth in autumn and early winter had access to plentiful food throughout most of their pregnancy, whereas women giving birth in spring and early summer experienced longer periods of inadequate nutrition. As nutrition in winter and early spring improved over time, this might explain why the relationship between month of birth and life span has weakened in more recent generations.

The work of Doblhammer & Vaupel inspired other researchers. Ueda

et al. (2013) used Swedish longitudinal data between 1991 and 2010 to study the effect of month of birth on mortality above the age of 30. Again, seasonal differences in food supply were mentioned as a relevant factor. At the beginning of the twentieth century, when fruit and vegetables were only widely available in the summer and autumn, mothers of children born in the autumn had a better nutritional status, especially during the third trimester of pregnancy, compared with mothers of spring-born children. Differences in prenatal nutritional levels were also mentioned by Muñoz-Tudurí & García-Moro (2008) to explain the relationship between season of birth and survival within the first three months and between the start of the third month and the end of the first year of life in cohorts born between 1634 and 1870 in a village on the island of Minorca. Summer births had the highest probability of death during the first three months of infancy.

A different perspective, based on life history theory, inspired Lummaa et al. (1998) to test whether humans time their breeding to the months of the highest probability of infant survival probability. Data for two Finnish parishes in the period 1770-1806 showed, however, that births were concentrated at times when the survival probabilities of the children were low. Gagnon (2012) tested whether children growing up in a nutrient-rich prenatal milieu could develop a demanding or hopeful phenotype that becomes accustomed to an abundance of resources over the long term. As an example, he studied individuals born during or after the harvest season. These hopeful phenotypes were disadvantaged when growing up in a harsher environment later in life. By studying conceptions and children under varying conditions of resource availability and disease load in Quebec since the seventeenth century, Gagnon showed that the season of birth acted as a good proxy for the level of nutrition in utero and as a reliable predictor of survival to age 60. A nutrition-rich milieu during the last trimester of pregnancy would lead to a demanding phenotype; whether this led to longer-term survival depended on the environment in which the individual lived later in life. Other researchers also stressed the decisive role of early programming, especially the idea of seasonal programming of the metabolism in the developing fetus. They referred to various environmental factors, climatic and environmental ones such as insolation, food and its nutritional value, as well as intrauterine ones such as levels of vitamins in the blood (Chmielewski & Borysławski, 2016).

As mentioned earlier, recently several authors have suggested that the association between the month of a child's birth and later outcomes such

as mortality might reflect inherent differences in personal attributes or family background. Buckles & Hungerman (2013) tested this proposition by using data on births from 1989-2001 and census data for births between 1943 and 1980 in the US. They found that children born in the winter had younger mothers, were less educated and less likely to be married. By introducing a set of family background controls, they could reduce the magnitude of the season of birth effect on outcomes such as lower birth weights and higher prematurity rates. Currie & Schwandt (2013) studied the seasonality of health at birth by comparing siblings conceived by the same mother at different times of the year; in this way, the effects of seasonality were not contaminated by socioeconomic differences between mothers who were selected into different conception months. The authors showed that in births in the period 1994-2010 in three US states there was a clear similarity between the seasonal patterns in gestation length across subgroups. This suggested that external environmental factors affecting society as a whole played an important role. Gestation length was lower for conceptions during the first five months of the year. Influenza infections triggering adverse birth outcomes were considered the factor behind this seasonal pattern in preterm births. In a recent study, Dorélien (2015) studied the relationship between birth month, considered as a proxy for early-life conditions, and child mortality in developing countries. She tested whether a non-random distribution of births within a year was a contributing factor. Accounting for maternal selection did indeed attenuate the relationship between birth month and health, but not in all countries studied.

SEASONAL DEATHS PATTERNS IN THE NETHERLANDS: A HISTORICAL OVERVIEW OF EARLIER RESEARCH

Before the nineteenth century, mortality data in the Netherlands were limited to local death records of ecclesiastical, civil and fiscal natures. In the second half of the 18th century, the group of people interested in this kind of material, namely clergymen and, in particular, medical doctors, constantly expanded (Van der Woude, 1980; Van Nierop, 1919). In 1755, at the request of the medical professor Thomas Schwencke (1693-1767), the municipal council of The Hague established a system of death registration on the basis of the deaths reported to the town clerk's office. These data were compiled by the mayor of The Hague, Johan Pieter Dierquens. He held the view that the lists would 'enable anyone afflicted by any of these diseases (...)

to clearly establish in which month of the year, and at what age in their life, they would be most at risk, and have to take the greatest precautions' (*Verzameling van naauwkeurige lysten, opgemaakt uit oorspronkelyke registers, betreffende de sterfte, geboortens, huwelyken, ouderdommen en ziektens in 's-Gravenhage, in het beloop van XIX jaaren, zedert het jaar 1755. tot 1773. incluis waargenomen : benevens een onderzoek aangaande de luchtstreek en het getal der inwoonderen aldaar*, 1774, p. 33).

Closely connected with the expansion of the Enlightenment into popular channels, reading and scientific societies had developed after 1740. Many of the members of these societies had a medical background. The societies tried to explain the mechanisms of disease and how diseases spread, for example by offering prizes for the best solutions to practical
600 medical problems. In 1770, the Holland Scientific Society (*Hollandsche Maatschappij der Wetenschappen*) offered a prize for the best answer to the question 'What diseases prevalent amongst mankind arise from the natural condition of our fatherland? How can one ward off these diseases, and by what means can they be cured?' (Huisman, 1997, p. 71). In 1779, the Hague physician Iman Jacob van den Bosch (1731-88) founded a society whose aim would be to compile a medical description of the Dutch Republic, the Physics and Medical Correspondence Society of the Dutch Republic (*Natuur- en Geneeskundige Correspondentie Societeit in de Vereenigde Nederlanden*). It attempted to achieve its objective by encouraging doctors and other scientists to compile 'reliable lists of births and deaths for each individual municipality' (Van Nierop, 1919, p. 202-203). The corresponding members were requested to restrict themselves in their medical observations 'to the predominant diseases and epidemics, in addition to the measures and medicaments relating thereto; and at the same time not to forget the location of the place, the differing characteristics of land and water, as well as the difference in the quality of the air' (Van Nierop, 1919, p. 203). The growing interest in the relationship between climatological and geographical factors and health was stimulated further by the systematization of research in meteorology (Van Lieburg & Snelders, 1989). In 1797, a report was published in Amsterdam by the medical board which highlighted the flaws in the existing birth and death registers and suggested ways of improving these. It included models of printed forms which would enable deaths for the municipality as a whole to be recorded in a consistent manner. One of the death forms was intended to compile information 'on the effect of the seasons on the diseases of the deceased persons', and had to provide the number of deaths by month and cause of

death (*Verzameling van stukken betrekkelyk de aanstelling eener commissie van geneeskundig toevoorzicht, te Amsterdam. Met Rapporten strekkende als bylaagen*, 1798).

It was only in 1811 that a national system of death registration was introduced, when birth, death and marriage registration, as incorporated in the Code Napoléon, became mandatory under the Imperial Decree of 19 April 1811 (Bulletin des Lois No. 6872). In 1829 the Provincial Medical Supervisory Board of North-Holland announced a competition to devise a death registration system which could meet the requirements of the medical profession. G. C. B. Suringar, professor of anatomy, physiology and surgery, drew up a comprehensive inventory of the requirements that had to be met by the death registration system. A key role was attributed to data enabling death to be related to climatological and geographical factors (Suringar, 1831). Around the same time, Adolphe Quetelet, using monthly numbers of deaths for Amsterdam, Rotterdam and The Hague and for four Belgian cities for an 18-year period, compared the changes in the monthly number of deaths with those of the monthly temperatures. Numbers of deaths were inversely correlated with the average temperatures, with the lowest numbers of deaths and the highest temperatures in the month of July and the highest number of deaths in January. Although Quetelet had no doubt about the importance of temperature, he also referred to the fact that during winter people were more exposed to the risk of death because they had difficulty in acquiring the necessary food, had a lower chance of finding work, and were condemned to a hopeless inactivity, factors that had a negative effect on people's morale and consequently also on their physical fitness (Quetelet, 1827).

From 1840 onwards, data on the number of deaths by sex, age and month of death were published, with a special focus on deaths under the age of two. Later on, these data were published separately for towns and other municipalities. In particular, during periods of extreme heat, medical doctors studied with interest the monthly mortality data for infant deaths. Less attention was paid to excessive infant mortality in the winter period. Based on what doctors observed in their own practices, they blamed the high infant mortality during the summer months to the food supplied to children. During hot weather, milk and bread porridge would undergo 'a slight change, and in this process start to decay… To dilute the milk, or to prepare other foods or drinks, water is used, and if one considers how poor the water is in some places as a consequence of the heat and drought, then one has another reason for the harms that are caused in particular during hot summers by artificial feeding of infants'. In hot

summers, the mortality of children of the poor increased more strongly than among children of the well-to-do. 'It is among these families in whose dwellings, sooner than in the houses of the rich, the bad air manifests itself; in which, be it out of ignorance, negligence or frugality, more often bad or badly prepared food is given to the children, or what has been left from an earlier day... Lack of discernment, unfamiliarity with the need for it also leads in these families to a less-than-required care for the complete purity of bottles and other utensils in which the child's food is kept and which is so extremely important, particularly in hot weather. The milk that is bought by those people for whom spending a few more cents is a question of high importance will generally be poorer [in quality] than the one that can be supplied by those who wish to buy good stuff, even if that
602 costs a bit more; and those who buy the bad and often-old milk, very frequently will have more trouble in trying to preserve it from decay' (Pous Koolhaas, 1869, p. 113; see also Wybrants, 1914, p. 104).

In the late nineteenth century, the heights of the summer peaks in infant mortality differed considerably between provinces (Jonkers, 1903). Analysis of the seasonal pattern of infant deaths for provinces and for urban and rural areas revealed that the summer peak in infant mortality had become more pronounced in the period 1895-1905 than it had been in the 1880s. In general, rural municipalities had lower and later summer peaks than urban ones. Zeeland was the province which over the whole period was characterized by the highest summer peaks, whereas in Groningen and Drenthe summer peaks were generally much lower (Saltet & Falkenburg, 1907). Changes over time were visible, however, as during the first decade of the twentieth century excess mortality was now apparent among infants in the countryside; those in the larger towns had taken advantage of the hygienic measures such as good drinking water and controlled milk stations that had been taken there in the recent past (Heynsius van den Berg, 1912, p. 914).

As infant and child mortality lost its role as the determining factor of the length of life, and most of the factors held responsible for the seasonal variation in mortality in this age group (food shortages, contaminated water and food, deficient heating and clothing, baptism ceremonies) became less relevant, medical doctors and statisticians lost interest in the topic. Recent historical studies, however, have taken up the topic again. Hoogerhuis (2003), for example, studied the seasonal pattern of infant mortality in a group of communities in the province of Zeeland in the period 1811-1900. Month of death was the starting point of his analysis.

Index values of the mortality risks of infants aged 1-5 months were in the period July-October 40-50 per cent higher than average; for infants aged 6-11 months this was 15-30 per cent. Short periods of breastfeeding and sudden weaning during the harvest season were responsible for the excess summer mortality. During the 1880s and 1890s, excess mortality in the 1-5 months age group even increased, a phenomenon that was related to the increased demand for female labor in agriculture after the agrarian depression of the 1870s. The likelihood of excess deaths in months 6-11 and at 1-2 years decreased after 1860.

This overview of Dutch and international studies has made it clear that the long nineteenth century was a crucial period for the study of seasonal mortality. In the Netherlands, strong seasonal effects were observed, but they differed as to region and between urban and rural residence. Contemporaries suggested that there were social class differences in seasonal mortality and changes over time. There were conflicting findings regarding the ages at which excess mortality was strongest. One problem is that almost all historical studies published so far made use only of data on numbers of deaths by month of death. In addition to this, seasonal differences in the characteristics of the mothers giving birth were not taken into account. In this paper, we will study the season-mortality relationship by focusing on the month of birth of the child and accounting for maternal characteristics. We use fixed-effects Cox proportional hazard models to shed new light on the effects that seasons had on mortality in the past. The present study encompasses data for three provinces, differing in their microclimatological environment. The dataset covers a very long time period, making it possible to study trends over time in the season-mortality relationship.

DATA AND HISTORICAL CONTEXT

Nationwide compulsory birth and death registration according to the rules of the Napoleonic Code was introduced in the Netherlands in 1811. From the 1990s onwards, volunteers and staff of Dutch archives began to enter these records into databases. These databases cover the period from the introduction of the vital registration system up to the varying dates at which these data are no longer in the public domain.[1] In 2009, a project called LINKS was launched, which aimed at the reconstruction of all nineteenth- and early twentieth-century families in the Netherlands on the

basis of these separate regional databases (Mandemakers, 2009).[2] The data that will be used here are the result of the LINKS project. They cover the provinces of Zeeland, Groningen and Drenthe, for which data entry has been completed and for which occupational information from certificates has been systematically entered (Mandemakers & Laan, 2017).

The province of Zeeland was for a long time a rural area with sea-clay grain farming. In the second half of the nineteenth century, agricultural modernization eroded the position of small farmers and farm laborers; industrialization took place after 1900 (Priester, 1998; Wintle, 1985). Groningen can be roughly divided into a northern area of clay soils where agriculture was highly commercialized, like in Zeeland, and a southern area of sand and peat. The peat districts became zones of important industrial development in the second half of the nineteenth century. In connection with the cultivation of potatoes, factories were established for making spirits, straw paper, etc. In Drenthe, peat-digging was conducted on a regular system of fen colonization. Sheep and cattle were reared and forest cultivated on the sand grounds. The poor agricultural soil did not always yield enough to provide the farmers with a decent living. In all three provinces, there were few urban centers of any importance and population density was low.

The database for each province consists of three basic tables with births, marriages and deaths. Death records are complete for the period 1811-1963, marriage records for 1812-1938, and birth records cover the period 1811-1913. The starting point for the construction of the database was a standardization of all first and last names. After standardization, birth and death certificates were linked on the basis of the names of the child, of his or her mother and father, or based on the names of child and mother. In the next step, births and deaths were linked to the marriage certificate of the child. This provided supplementary information for linking birth and death certificates, as the marriage certificates supplied the names of the parents of the bride and groom, information that was sometimes not available on the death certificate of the child, as well as the names of the parents of the child's partner, which could enable a connection to be made to a death certificate containing the partner's name. Next, the information on brides and grooms was linked to the marriage certificates of their parents. Information thus became available on date of birth, sex, place of birth, date of marriage of the individual, date of marriage of the individual's parents, and date of death of the individual. The death file also contained information on children recorded as being in a lifeless state (mostly

stillbirths) but we excluded this group from the analysis. For children for whom no death certificate was available, for instance because they were still alive in 1963, the date of last observation was determined on the basis of the date of their marriage. In cases where neither a death record nor a marriage record were available, we assumed that a person had at least survived until the age of two. In our analyses we have tested whether this assumption could have affected our results.

The exact age at death was unknown for about 46 per cent of the children (Zeeland, 46 per cent; Groningen, 45 per cent; Drenthe, 49 per cent). For about 44 per cent of these censored deaths we have information on the marriage date. For between 24 and 27 per cent of the individuals we censor their observed length of life at age two. This includes individuals who remain single for their whole life and individuals who died outside their province.

Given the different observation windows for birth, death and marriage records, not all births could be linked to the marriage information of the parents, as some parents were married before 1811. The nature of our data does not allow us to find out a couple's exact number of children in all cases. For each couple we only know the children who were born in the specific province in the period for which birth and death records were available. The number of children used in the analysis will therefore underestimate the actual number of children produced. However, by comparing our data with available statistics from other sources on births and infant mortality (Oomens, 1989; Ekamper & Van Poppel, 2008), we are confident that our data offer a more or less correct estimate of the fertility and mortality levels of our provinces.

Table 1 shows that we possessed information on almost 1,695,000 live-born children. Almost 67 per cent of the study group belonged to the working classes, 13.9 per cent to the middle class and only 1.6 per cent to the elite.[3] Infant mortality was between 9 and 19 per cent and early childhood (under-two) mortality between 12 and 23 per cent, which is again in the range of values found in published statistics. Zeeland was characterized by very high infant mortality, in many parts even higher than 30 per cent. Infant mortality rates were very low (below 10 per cent) in the western part of Groningen and in Drenthe.

The sex ratio of live births was 1.05 male to female births. Unfortunately, the age of the mother at birth is only available for Zeeland, and only for mothers that could be linked to marriage records. The highest percentage of mothers in Zeeland was in the age group 25-29 years (22%). A rough

approximation for the life phase when mothers gave birth which is available for all provinces is the timing of births relative to the time of marriage, but of course this is available only for those parents who were indeed married. Only 5 per cent of children were born less than a year after the date of marriage or before marriage. For around 4 per cent of all births the father is unknown. As expected, a minority of the children born in the selected, mainly rural, provinces was born in an urban environment[4]: 22 per cent in Zeeland, 25 per cent in Groningen, and 10 per cent in Drenthe.

METHODS

Recently, seasonal mortality patterns have been studied by using survival methods as data often contain (right-)censored observations. Another advantage of survival methods is that they take the whole life history into account. Survival methods modeling the hazard rate (the mortality rate) are particularly suitable for dealing with censoring, because the hazard rate is invariant to censoring (Kleinbaum & Klein, 2005). Hazard rates models are therefore perfect tools to deal with the observational problems that we encounter for that part of the study population for which we have no information on a child's date of death but only on his or her date of marriage (provided that this marriage was performed in the province of birth). When the date of marriage was not given we censored these observations at age two.[5]

A common way of accommodating the presence of observed characteristics is to specify a proportional hazards model in which the hazard rate is the product of a baseline hazard (also called duration dependence, in our case age dependence) common to all individuals and a covariate effect (Cox, 1972). In this model, a change in a covariate, say the age of the mother at birth, shifts the hazard proportionally. We tested three different specifications of Cox proportional hazards models to study the seasonal birth month patterns of early childhood (under-two) mortality: (1) a baseline model accounting for birth month only; (2) an extended model accounting for available additional individual and family characteristics as presented in Table 1 (model 1 plus sex, years since marriage, father known or unknown, social class, urban or rural residence, and period of birth); (3) a fixed-effects model stratifying by mother's identity (Rabe-Hesketh & Skrondal, 2012) to control for unobserved characteristics associated with having the same mother, excluding model 2 control variables that were

Table 1. Descriptive statistics of the dataset on births covering the Dutch provinces of Drenthe, Groningen, and Zeeland for the period 1812-1912

Province		Drenthe	Groningen	Zeeland
Number of live births		329,849	687,668	661,009
Mortality	Infant mortality	8.9	10.7	19.0
	Mortality under age 2	12.3	13.8	22.5
Month of birth	January	8.8	9.1	9.0
	February	8.5	8.8	8.6
	March	9.3	9.4	9.3
	April	8.5	8.5	8.2
	May	8.2	7.9	7.6
	June	7.3	7.1	7.0
	July	7.6	7.3	7.4
	August	8.1	8.1	8.5
	September	8.6	8.6	8.9
	October	8.7	8.5	8.8
	November	8.0	8.1	8.2
	December	8.5	8.5	8.5
Sex of child	Male	51.4	51.3	51.2
Mother's age	< 20			0.9
	20 – 24			12.4
	25 – 29			22.0
	30 – 34			20.2
	35 – 39			14.4
	40 +			6.6
	Unknown	100.0	100.0	23.5
Years since marriage	< 1	5.1	5.1	4.4
	1 – 2	17.8	18.9	17.2
	3 – 5	17.6	18.6	17.4
	6 – 9	16.3	17.0	16.5
	10 +	20.5	20.1	20.6
	Unknown	22.7	20.3	23.9
Father unknown		2.7	4.3	4.5
Social class	Unskilled workers	42.6	40.5	49.3
	Semi-skilled workers	5.6	10.1	10.0
	Skilled workers	11.3	14.9	12.1
	Farmers	24.8	11.8	6.3
	Middle class	12.2	18.2	10.2
	Elite	1.4	2.0	1.2
	Unknown	2.0	2.5	11.0
Urban place of birth		10.0	24.8	24.1
Period of birth	1812-1836	13.5	18.3	21.2
	1837-1861	19.3	21.7	24.0
	1862-1886	27.7	28.3	27.4
	1887-1912	39.5	31.8	27.3

Source: links dataset 2017

fixed for mothers over time (Dorélien, 2015).[6] To test whether birth month patterns varied over social classes, we also ran models for each social class separately. All models were run for each province separately. We tested the significance of birth month effects by running joint significance tests on all models.

Additionally, we analyzed the monthly hazard rate patterns of infant and early childhood mortality by month of birth over the first 24 months of life by running Cox proportional hazards models for each combination of month of birth and month of life, controlling for additional individual and family characteristics per province. We again ran the models for social classes separately.[7] The adequacy of the proportional hazards assumption was confirmed by examining plots of Schoenfeld residuals (Schoenfeld, 1980). To visually analyze changes in hazard rate patterns over time and monthly birth cohorts, we used a heat map approach (Wilkinson & Friendly, 2009).

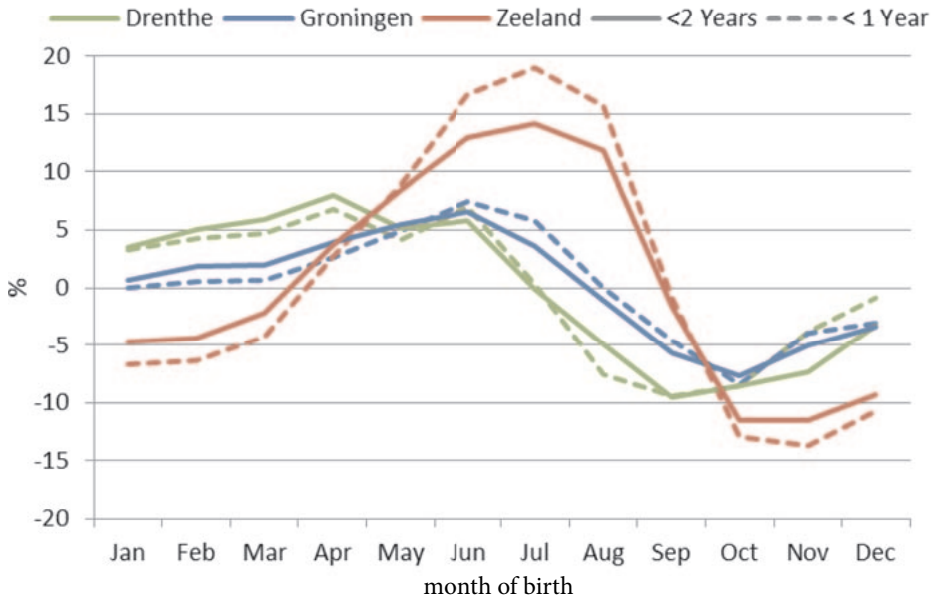
RESULTS

DESCRIPTIVE INDICATORS

The overall under-two childhood mortality rates by birth cohort over the period 1812-1912 varied from relatively low in Drenthe (12.3%) and Groningen (13.8%) to relatively high in Zeeland (22.5%). Decomposing early childhood mortality by month of birth reveals clear seasonal patterns, although the patterns show remarkable differences between the provinces (Figure 1). Early childhood mortality in Zeeland shows a strong peak in the summer and lows in autumn. Compared to the overall average mortality, rates are 14 per cent higher in July and almost 12 per cent lower in October and November. Seasonal patterns in Drenthe and Groningen are clearly less strong. The Groningen data show a less pronounced summer high and autumn low. Moreover, the summer peak is earlier than in Zeeland. The highs and lows in the seasonal pattern of Drenthe are even earlier than in Groningen. With no clear peak in the summer, mortality rates in Drenthe are the highest in April and lowest in September. If we look at infant mortality only, the seasonal patterns are quite similar, but slightly more pronounced.

Looking at other characteristics of the infants and their families, we observe early childhood mortality differences in line with other studies (Fig-

Figure 1. Early childhood and infant mortality by month of birth and province (deviation from average provincial hazard rates), the Netherlands, 1812-1912



ure 2). Early childhood mortality rates are 14 to 20 per cent higher for boys than for girls. Children born from older mothers show higher risks than those born from younger mothers (data available for Zeeland only). We do not find higher risks for the youngest mothers. However, since the age of the mother was only known for married mothers, this might be caused by the missing age data for unmarried (and more likely younger) mothers. We see a similar pattern for the timing of births since marriage, although children born before marriage or within one year of the marriage show higher risks than the reference category. Children born from unknown fathers face much higher risks than the other children, which could also very well be linked to younger mothers. With respect to social class, children from the elite and from farmers have lower risks than children from the working class. Differences between children born in rural or urban environments are quite variable. Urban mortality rates are higher in Groningen, but lower in Drenthe and Zeeland. However, all provinces are predominantly rural with relatively small cities, except for the city of Groningen by far the largest city of the whole dataset. Children born in smaller cities apparently face lower risks than children born in rural areas, and even much lower than those born in a large city.

Figure 2. Early childhood (under-2) mortality by characteristics and province (hazard ratios), the Netherlands, 1812-1912*

* non-adjusted for other characteristics; light color bars are non-significant ($p<0.05$).

COX PROPORTIONAL HAZARDS MODELS

To test whether the descriptive results of the previous section on early childhood mortality persist, Table 2 presents the results of three different Cox proportional hazards models as specified in the methods section. The results of model 1, the baseline model, reflect the results presented in Figure 1 and serve as the reference model. The results of model 2 show to what extent the baseline model results persist when accounting for the additional individual and family characteristics presented in Figure 2, In general the birth month patterns remain similar to the baseline model and are even slightly more pronounced, particularly for the summer months in Zeeland. As for all additional individual and family characteristics in the joint model, the patterns of the hazard ratios are similar to the baseline models and remained statistically significant. Boys remain more vulnerable than girls; the longer the period in years since marriage (~ the older the mother[8]), the higher the risk compared to those born 1-2 years after marriage (again except for children born before or within one year of marriage); children with unknown fathers remain more vulnerable; children

from the highest social class and from farmers are again less vulnerable than (unskilled) laborers; and children born in the city of Groningen still are more at risk than children born in rural areas. After controlling for maternal selection (model 3), the birth month effects remained jointly significant in all provinces. In Zeeland, the seasonal pattern remained more or less similar, but the summer peak strongly increased. In Groningen, the autumn low remained, but the hazard ratios for birth months February to June leveled with the July summer peak. In Drenthe, the overall pattern remained rather similar except for slightly lower hazard ratios for birth months June and July.

To test whether birth month patterns varied over social classes, we ran all models for each social class (and province) separately. In general, social class specific birth month patterns were in line with the overall provincial patterns (see appendix Table 1). However, there were a few exceptions. Middle-class children in Drenthe showed higher under-two mortality risks for those born in the winter months, but hardly any increase for those born in the summer months. Children of farmers in Groningen showed higher risks than the other social classes in Groningen when born in the summer months, and the mortality peak was earlier (May-June) for children from unskilled workers. Almost all birth month patterns were significant according to the joint significance tests. However, in Drenthe and Groningen, the patterns for the elite were in line with the general pattern but not significant due to the small numbers. In Zeeland, all social classes followed similar patterns, with the skilled workers showing the lowest summer peak.

Years since marriage						
< 1	1.126 ***	1.249 ***	1.098 ***	1.180 ***	1.042 **	1.064 ***
1 – 2	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
3 – 5	0.981	1.019	1.044 ***	1.045 ***	1.127 ***	1.088 ***
6 – 9	1.123 ***	1.212 ***	1.163 ***	1.194 ***	1.220 ***	1.190 ***
10 +	1.157 ***	1.367 ***	1.150 ***	1.271 ***	1.267 ***	1.271 ***
Unknown	0.905 ***	1.000 ***	0.815 ***	1.000 ***	1.187 ***	1.000 ***
Father is unknown	1.268 ***		2.018 ***		2.512 ***	
Social class						
Unskilled workers	(ref)		(ref)		(ref)	
Semi-skilled workers	1.077 **		1.146 ***		0.873 ***	
Skilled workers	1.029		1.090 ***		0.976 **	
Farmers	0.923 ***		0.841 ***		0.768 ***	
Middle class	1.042 *		1.027 **		0.870 ***	
Elite	0.781 ***		0.854 ***		0.795 ***	
Unknown	1.257 ***		1.301 ***		0.366 ***	
Urban place of birth	0.883 ***	0.260 ***	1.050 ***	0.295 ***	0.723 ***	0.269 ***
Period of birth						
1812-1836	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
1837-1861	1.397 ***	1.143 *	1.207 ***	1.060	1.061 ***	1.040
1862-1886	1.558 ***	1.217 **	1.308 ***	1.055	0.916 ***	1.014
1887-1912	1.363 ***	1.292 **	0.996	1.072	0.600 ***	0.943

Notes: *** p<0.001, ** p<0.01, * p<0.05

Model 1: baseline model; Model 2: additionally controlled for individual and family characteristics and period; Model 3: controlled for (same mother) fixed-effects.

Table 2. Cox proportional hazards model hazard ratios (hr) for early childhood mortality (< 2 years) by control variables, by province, the Netherlands, 1812-1912

	Drenthe			Groningen			Zeeland		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
	HR	HR	HR	HR	HR	HR	HR	HR	HR
Month of birth									
January	1.144 ***	1.150 ***	1.182 ***	1.100 ***	1.099 ***	1.116 ***	1.084 ***	1.071 ***	1.092 ***
February	1.162 ***	1.174 ***	1.204 ***	1.113 ***	1.117 ***	1.163 ***	1.086 ***	1.080 ***	1.124 ***
March	1.171 ***	1.178 ***	1.186 ***	1.114 ***	1.123 ***	1.183 ***	1.110 ***	1.106 ***	1.143 ***
April	1.192 ***	1.193 ***	1.211 ***	1.136 ***	1.147 ***	1.178 ***	1.184 ***	1.193 ***	1.243 ***
May	1.159 ***	1.154 ***	1.150 ***	1.154 ***	1.160 ***	1.179 ***	1.250 ***	1.275 ***	1.332 ***
June	1.168 ***	1.163 ***	1.139 ***	1.168 ***	1.177 ***	1.189 ***	1.322 ***	1.358 ***	1.407 ***
July	1.098 ***	1.091 **	1.050	1.136 ***	1.144 ***	1.172 ***	1.351 ***	1.393 ***	1.466 ***
August	1.040	1.038	1.032	1.078 ***	1.081 ***	1.088 ***	1.326 ***	1.344 ***	1.410 ***
September	0.988	0.989	0.986	1.024	1.026	1.057 **	1.134 ***	1.139 ***	1.157 ***
October	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
November	1.017	1.017	1.003	1.034 *	1.030	1.035	0.997	0.992	0.991
December	1.065 *	1.066 *	1.079 *	1.052 **	1.048 **	1.066 **	1.026	1.019	1.019
Male child		1.145 ***	1.157 ***		1.199 ***	1.208 ***		1.154 ***	1.190 ***

To obtain a better understanding of the patterns of early childhood mortality over time, we analyzed the monthly hazard rate patterns in the first two years of life by month of birth. Figures 3 to 5 show early childhood mortality rates by consecutive months of birth from January to December over the first 24 months of life. Over the whole period, monthly mortality rates are much higher for Zeeland than for Drenthe and Groningen. However, the monthly variation over the period shows some remarkable variation between Zeeland and the other provinces. Infant mortality in the first month of life (the dots in the graphs) shows seasonal patterns with the highest risks for those born in the summer and winter. In Groningen and Zeeland, mortality risks among those born in the summer are higher than among those born in the winter, but in Drenthe mortality risks in the winter are higher than in the summer. Although mortality risks are roughly declining as children get older, cohort mortality rates do not show a continuous decline over time. In particular, in the first summer after birth, mortality rates stop declining or even increase again. In Drenthe, mortality rates for children born in the months January to April stop declining after three months (or for those born in March slightly increase in July) and start declining again from July-August. In Groningen, the pattern is quite similar except for children born in April who face a clear mortality increase in July. This summer effect, however, is much stronger in Zeeland where mortality rates for children born from February to June strongly increase in August and are even higher for those born in May and June than in their month of birth. The summer effect thus appears to be particularly strong in Zeeland compared to the other provinces, not only for children born in the (late) summer months, but also for children born a couple of months before summer. Although mortality rates in general decline again after the summer mortality peak, this again is not a continuous decline. However, this cannot be easily read from Figures 3 to 5.

Figure 3. Average monthly hazard rates by month of birth for the first 24 months of life, province of Drenthe, the Netherlands, 1812-1912

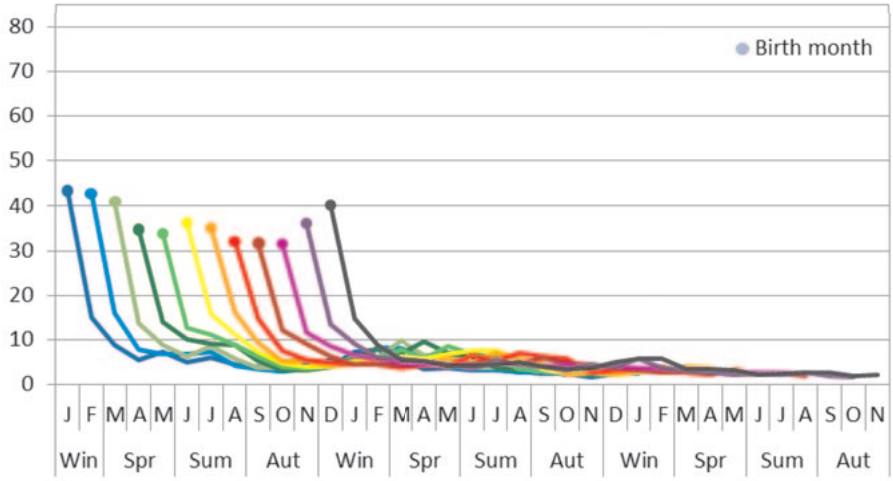


Figure 4. Average monthly hazard rates by month of birth for the first 24 months of life, province of Groningen, the Netherlands, 1812-1912

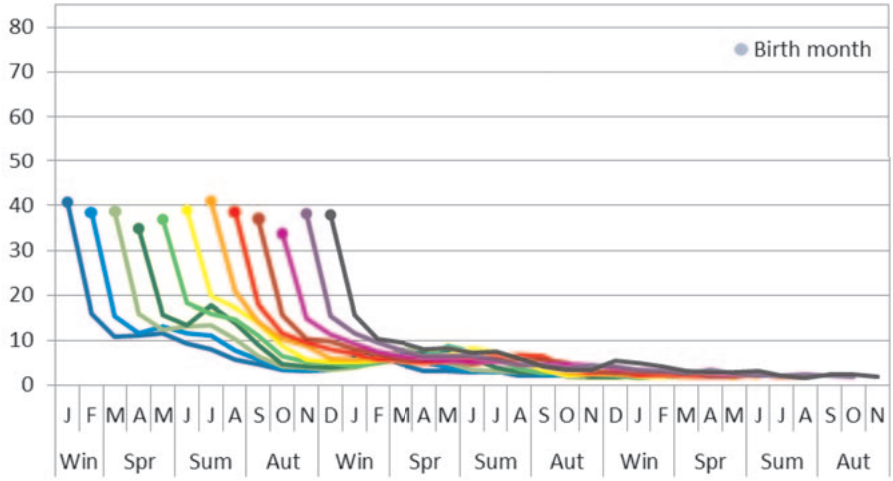
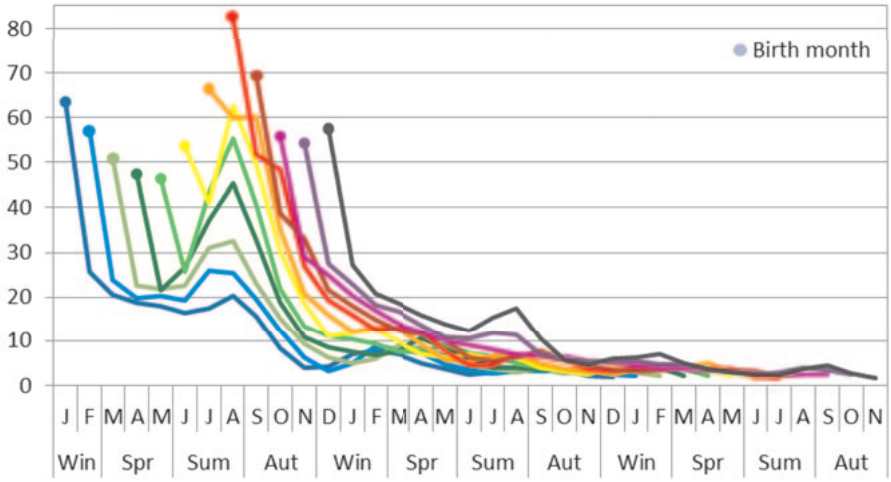


Figure 5. Average monthly hazard rates by month of birth for the first 24 months of life, province of Zeeland, the Netherlands, 1812-1912



By presenting the data from Figures 3 to 5 in a different way, we obtain a better view of the mortality patterns after the summer peak. Figures 6 to 8 show the same data in heat maps. The heat maps show the monthly mortality rates displayed in a two-dimensional table by month of birth and calendar month. The heat map table cells are color-graded, ranging from high (red) via medium (yellow) to low (green) mortality rates, enabling us to detect clustering patterns over cohorts and time. The heat maps again show the summer mortality peaks, particularly in Zeeland, but also reveal a cohort mortality increase clustering in the diagonal of higher mortality rates 12 to 13 months after birth. The early childhood mortality by birth month cohort thus is affected by cohort effects for month of birth and 12 to 13 months after birth, as well as by period effects for summer months.

We observe similar patterns for separate social classes (not shown). Mortality differences in the first month of life show similar birth month patterns for children born from workers, farmers and the middle class. However, the most striking differences between these social classes are that the mortality risks in the first summer after birth are much lower for children from farmers (around 40%) and slightly lower for middle-class children (around 13%) than for working class children, especially in Groningen and Zeeland. Differences between social classes in Drenthe are much smaller. According to the joint significance tests, birth month patterns were in general significant in all of the first 15 months.

Figure 6. Heat map of average monthly hazard rates by month of birth for the first 24 months of life, province of Drenthe, the Netherlands, 1812-1912

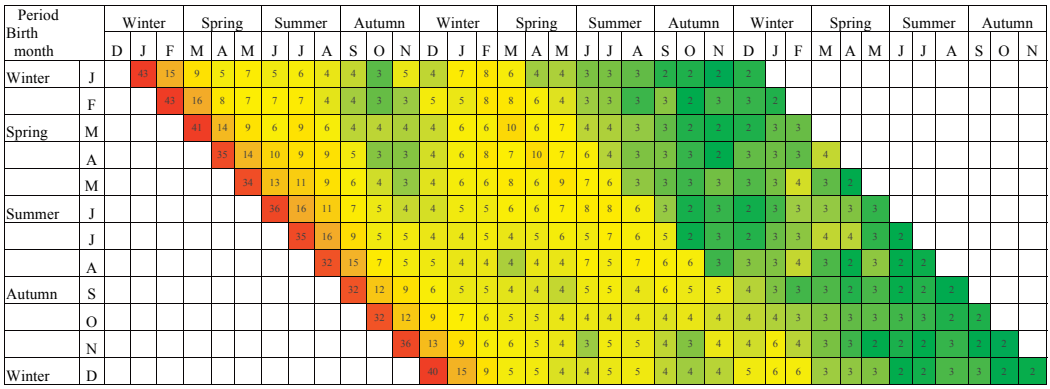


Figure 7. Heat map of average monthly hazard rates by month of birth for the first 24 months of life, province of Groningen, the Netherlands, 1812-1912

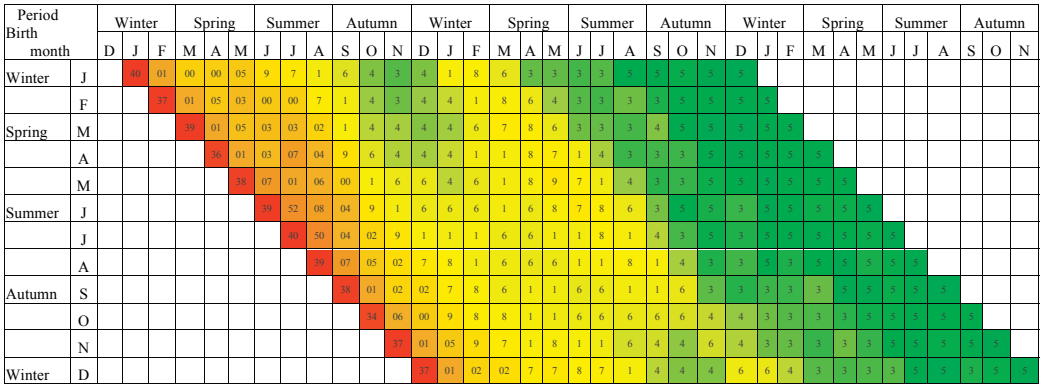
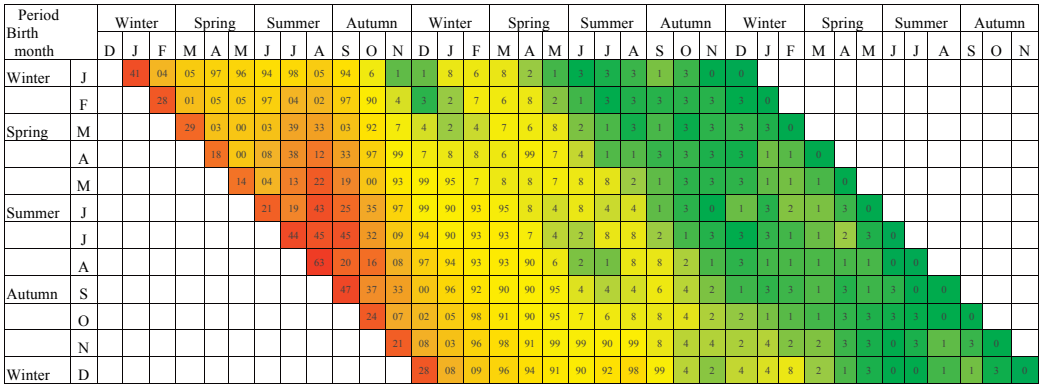


Figure 8. Heat map of average monthly hazard rates by month of birth for the first 24 months of life, province of Zeeland, the Netherlands, 1812-1912



Compared to most earlier research on the historical patterns of seasonal infant and childhood mortality, in which fluctuations in the published number of deaths by month of death were studied, this study took a different approach. We simultaneously analyzed individual-level data on month of birth and month of death. Another step forward was that we included in our analysis personal and family attributes such as social class, urban-regional background and time to make sure that the association between the month of a child's birth and his or her death does not reflect inherent differences in the backgrounds of the mothers giving birth. We studied a long period of time and applied multilevel hazard models on the seasonal patterning of death during the first two years of life.

In all provinces, we observed significant birth month effects on infant and childhood mortality. These effects remained when we controlled for a variety of background characteristics such as the social class of the family, urban or regional residence, province, and period of birth. Another important finding is that there were very marked differences in the strength of the seasonal effects between the three studied regions. This finding is in line with the studies on Italy by Breschi et al. (1986; 1997) and on Germany by Knodel (1983). The fact that even in a small country such as the Netherlands, with only tiny differences in weather conditions, such large differences in seasonal patterns were observed makes it clear that social, economic and ecological conditions and cultural practices are more relevant than temperature. At the same time it makes clear that national-level analyses of seasonal mortality patterns do not make much sense. A third, provisional conclusion is that mortality differences in the first month of life do not differ between social classes. However, the mortality risks in the first summer after birth are much lower for children from farmers and slightly lower for middle-class children than for working-class children. This might be explained by their better access to different kinds of food and perhaps also by different weaning patterns. Until now, we have not seen any other study which included information on the specific seasonal patterns of the various social classes, although many studies implicitly referred to the greater workload of mothers performing agricultural work. It remains to be seen whether social class differences remain absent or present themselves when a more detailed classification is used, in which agricultural workers are distinguished from those working outside agriculture. A fourth element, again in line with earlier studies such

as those by Breschi et al. (1986) is that in the Netherlands the cold winter months do not show increased mortality risks for children.

In our study, Zeeland stands out as a province with much stronger seasonal effects. Mortality in the first month of birth in Zeeland showed a strong peak for children born in the summer and low values for those born in the autumn. Seasonal patterns in Drenthe and Groningen were much weaker. In Groningen, the summer high was less pronounced, and in Drenthe and Groningen the summer mortality rates were earlier than in Zeeland. In general, the introduction of the family characteristics caused an increase in the effect of month of birth in the summer in Zeeland whereas elsewhere the patterns remained similar. In Zeeland, children born in the months January to May all faced high risks in their first month of birth and these risks again reached high values as soon as these children reached the summer period. The children of workers were even more vulnerable than those of farmers. Children born in the summer faced extremely high risks in the first month of birth, but did not show increased risks when they entered their second summer period. For children born in the autumn, first-month risks were comparable with those of children born in the winter, but the increase in risks when this group reached the summer was lower. Winter effects were very small, in particular in Groningen, and were slightly greater in Zeeland.

Contemporary Dutch medical doctors had pointed to the fact that infants ran a strongly increased risk of dying during the harvest period when mothers worked on the land and a premature move from breastfeeding to artificial feeding took place (Helderman, 1875). In the nineteenth century, a large number of women in Zeeland were involved in fieldwork, in particular between April and September-October. Labor-intensive crops like wheat, peas, beans and colza, common madder and flax were dependent on the labor of women (Priester, 1998; Van Cruyningen, 2000) and this frequently led to a shortening of the length of the breast-feeding period. In Groningen as well, intensification of agriculture in the last quarter of the nineteenth century led to an increased demand for female labor during the period from April to October (Paping, 1995), but this did not have effects of the same order as in Zeeland. This might be related to differences in the frequency and duration of breastfeeding. Few data have been published by contemporaries on the practice and duration of breastfeeding (Hofstee, 1983; Hoogerhuis, 2003). For Groningen no data are available at all whereas for Drenthe it was argued that infants were breastfed by the mother for a period of one year or more. However, supplemen-

tary food was given to the child after only a few weeks. For Zeeland, information for various parts of the province was available from the 1860s and 1870s. In the city of Goes, only one in four children was breastfed, while in several other parts of the province breastfeeding was almost absent; in particular, artificial feeding predominated in the countryside. It is highly probable that the very high peak in mortality in the summer might be explained by the high participation of females in peak summer activities, often away from home, causing early weaning or irregular breastfeeding of children and a lesser degree of care and protection. Many of those classified as workers in Zeeland in effect were working in agriculture. An additional factor is the difference in the sanitary situation of the provinces. The situation in Zeeland was generally worse than in Groningen and Drenthe, due to the gradual salinization and the high water table in Zeeland. This rendered the restricted volume of fresh running and well water undrinkable, and provided an ideal environment for the larvae of the malaria-carrying mosquito, thereby making malaria virtually endemic in this part of the Netherlands until about 1870 (Hoogerhuis, 2003). Where breastfeeding was absent or irregular and artificial feeding was practiced, the salinization and the high level of environmental contamination of the water strongly increased the risk of diarrhea, the most significant cause of death among infants. In this way, it was the interaction between low incidence of breast-feeding and the atrocious condition of the drinking water and sanitation that led to high summer mortality in Zeeland, not only for children born in the summer but also for those born a few months before summer.

620

A question that remains to be answered is whether the seasonal effects have changed over time as sanitary and environmental conditions, and hygienic knowledge and practices, improved and the female labor force participation decreased. Has the gradual elimination of the differences in ecological environment and socioeconomic setting between regions led to a decreasing impact of the season on child survival? Another issue to take into account is the climatic variation over time and within and between meteorological seasons. Do extremely hot summers or cold winters lead to an increasing impact on seasonal child mortality?

Furthermore, there is an urgent need to extend this kind of study to provinces with a more varied population, with larger urban communities, a more numerous middle class and elite, and with a more limited number of women involved in work.

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1. Death records enter the public domain only after 50 years, marriage records after 75 and birth records after 100 years.
2. *LINKS* is hosted by the International Institute of Social History (IISG). Other participating institutes include the Historisch Centrum Overijssel (HCO), Tresoar, and the Leiden Institute of Advanced Computer Science (LIACS), the Netherlands Interdisciplinary Demographic Institute (NIDI), the Meertens Institute and the Virtual Knowledge Studio (VKS).
3. This social class categorization is based on the HISCO coding scheme (*Historical International Standard Classification of Occupations*) (Van Leeuwen, Maas & Miles, 2002). These historical occupational titles were classified according to the SOCPO social class scheme proposed by Van de Putte & Miles (2005). SOCPO (Social Power) is defined as the potential to influence one's "life chances" through control of scarce resources, and is based on economic and cultural resources. Economic power is based on factors such as self-employment, skill and authority (command). Sources of cultural power were "non-manual versus manual occupations" and nobility and prestige titles.
4. We classified all municipalities with a population size of at least 5,000 inhabitants and a population density of at least 350 inhabitants per km2 in the year 1850 as urban: the city of Groningen (population size 33,500, population density 1,300 km2), Meppel (6,500; 590) in Drenthe, and Goes (5,300; 750), Middelburg (15,800; 1,100), Vlissingen (9,800; 1,200), and Zierikzee (7,000; 360) in Zeeland.
5. To test for potential biases we repeated all analyses excluding all artificially censored observations. Results (not shown) were similar to the analyses including the censored data.
6. We excluded father known or unknown and social class. Both variables are not fixed by definition, but appeared to be (close to) fixed for mothers in our dataset.
7. Due to too limited numbers of observations we left out the elite.
8. Model 2 results for Zeeland including age of the mother instead of years since marriage (not shown) are similar to the results presented in Figure 2.

Appendix – Table 1. Cox proportional hazards model hazard ratios (hr) for early childhood mortality (< 2 years) by month of birth, per social class and province, the Netherlands, 1812-1912

Province / Birth month	Unskilled workers	Semi-skilled workers	Skilled workers	Farmers	Middle class	Elite
Drenthe	HR	HR	HR	HR	HR	HR
January	1.2039 ***	1.1040	1.0901	1.1113 **	1.1278 *	1.1547
February	1.1907 ***	1.3045 ***	1.2189 ***	1.0867 *	1.1861 **	1.1682
March	1.2853 ***	1.4024 ***	1.0550	1.0682	1.0925	1.2449
April	1.2769 ***	1.3213 ***	1.1099	1.1688 ***	1.0372	1.3157
May	1.2026 ***	1.2051 *	1.1732 **	1.1433 ***	1.0524	1.3538
June	1.2196 ***	1.2377 **	1.1340	1.1400 **	1.0520	1.4010
July	1.1133 ***	1.1395	1.1609 **	1.0424	1.0363	1.1876
August	1.0510	1.1993 *	1.0903	1.0056	0.9683	1.2822
September	1.0386	1.0002	1.0209	0.8813 **	0.9438	0.9155
October	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)
November	0.9991	1.1155	1.1885 **	0.9783	0.9334	1.1418
December	1.0193	1.1366	1.1902 **	1.0389	1.1199 *	1.1208
Groningen						
January	1.1148 ***	1.0635	1.0785 *	1.0897 *	1.1142 ***	1.0168
February	1.1285 ***	1.1497 ***	1.1337 ***	1.1521 ***	1.0646 *	1.2047
March	1.1590 ***	1.0859 *	1.1228 ***	1.1056 **	1.1139 ***	1.0558
April	1.1810 ***	1.1711 ***	1.1183 ***	1.0719	1.1288 ***	1.1843
May	1.2463 ***	1.1012 **	1.1479 ***	1.1295 **	1.0854 **	1.0650
June	1.2220 ***	1.0992 *	1.1989 ***	1.2252 ***	1.0947 **	1.1983
July	1.1543 ***	1.1674 ***	1.0892 **	1.2435 ***	1.1363 ***	1.0637
August	1.0629 **	1.1234 **	1.1113 **	1.0552	1.0781 **	1.0851
September	1.0341	1.0794	1.0170	1.0212	0.9872	0.9744
October	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)
November	1.0021	1.0371	1.0637	0.9829	1.0692 *	0.9581
December	1.0665 **	1.0268	0.9984	1.0230	1.0297	1.1407
Zeeland						
January	1.0838 ***	1.0502	0.9806	1.0766	1.0918 **	1.3810 **
February	1.0945 ***	1.0413	1.0019	1.0874	1.1733 ***	1.1937
March	1.1368 ***	1.0771 *	0.9742	1.1052 *	1.1274 ***	1.1508
April	1.2172 ***	1.2183 ***	1.1072 ***	1.1285 **	1.2161 ***	1.2738 *
May	1.3160 ***	1.2741 ***	1.1686 ***	1.2961 ***	1.2730 ***	1.2958 *
June	1.4170 ***	1.2762 ***	1.2230 ***	1.3457 ***	1.3792 ***	1.3934 **
July	1.4446 ***	1.3810 ***	1.2808 ***	1.3966 ***	1.2915 ***	1.5758 ***
August	1.3794 ***	1.3241 ***	1.1907 ***	1.4575 ***	1.3450 ***	1.5083 ***
September	1.1489 ***	1.1314 ***	1.0391	1.3455 ***	1.1073 **	1.3088 **
October	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)
November	0.9807	0.9818	0.9365 *	1.0636	1.0064	1.4995 ***
December	1.0232	1.0058	0.9697	1.0346	1.0714	1.1101

Notes: *** p<0.001, ** p<0.01, * p<0.05

Results from full models per province and social class including individual and family controls

[16]

MATHIAS LERCH & MICHEL ORIS

Mortality during heat episodes in Switzerland: a story of vulnerability[1]

INTRODUCTION

In recent years, Theo Engelen's research interest has moved to seasonal fluctuations in demographic behaviors. This contribution to his Festschrift is connected to this topic, although we consider a recent period and a specific issue, i.e. the mortality response to heatwaves. Although heatwaves have a long history, temperature peaks emerged as 'new social risks' on the political agenda in 1995. In July of that year, approximately 750 heath-related deaths occurred in Chicago over a period of just five days. Eric Klinenberg's (2002) book *Heat wave: A social autopsy of disaster in Chicago* became a bestseller, since in 2003 Europe was also hit by a similarly brutal episode. A so-called Omega block had led to a stagnation of the weather pattern, creating a high-pressure ridge that lasted for several days, mainly in France, Italy and Switzerland. The resulting record temperatures caused an excess of deaths which has been estimated to range from 35,000 to 55,000[2]. The large majority of the victims were older people living in urban agglomerations (Kovats & Jendritzky, 2005; Sardon 2006, p. 292). This led to the implementation of new heat warning systems. However, a second heat wave hit Europe in 2006, covering a larger area of the Northern Hemisphere and at its most intense in July. The anomalies in temperature maxima were also higher, resulting in the hottest summer ever recorded in Switzerland (Rebetez, Dupont & Giroud, 2008).

Heatwaves have since become an issue of concern for the future of our societies, with the emergence of global warming as a major challenge to human settlement. In Switzerland, the trend in warming during the 20th century was twice as pronounced as the worldwide trend, particularly in the last 40 years, which have seen an average increase in temperature of

0.6 degrees Celsius per decade, against 0.1 over the whole century. The challenges for human health are particularly exacerbated by the changing pattern of warming, which is more and more driven by an increase in maximum rather than minimum temperature and therefore mainly concerns summer rather than winter periods when compared to the past (Rebetez, et al., 2008). The Swiss population is thus increasingly exposed to extreme heat events, and is expected to be so in the future. Indeed, not only do predictions of an intensification of heat waves (in terms of frequency, intensity and duration) appear to be robust (Beniston, 2004), but all demographic scenarios also consistently predict a continuous process of population ageing and urbanization. As a result, a growing number of older (and consequently frailer) people living in dense human settlements will be particularly vulnerable to heat.

Although the adverse effect of heat on mortality has been confirmed in different countries, at different latitudes and on different continents (Basu, 2009; Basu & Samet, 2002), the literature shows considerable geographic heterogeneity in the phenomenon. The mortality response to temperature increases above optimal levels for survival of local populations was stronger in the Southern cities of Europe when compared with the Northern ones (Baccini, et al., 2008), whereas the inverse was observed in the United States (Curriero et al., 2002). The mortality response also differed greatly between US cities with identical weather patterns (Curriero et al., 2002). Moreover, there is considerable intra-city variability of heat-related mortality across neighborhoods and census tracts, pointing to the relevance of social and community level risk factors (Yardley, Sigal & Kenny, 2011).

This geographic heterogeneity mirrors the complexity of the phenomenon. Heat-related mortality is determined by the vulnerability of a complex socio-ecological system which is composed of 1) physical exposure to high temperature (i.e. heat), 2) the population's sensibility or its capacity to absorb the heat impact, and 3) the population's adaptation to extreme heat events at the societal and individual level (Wilhelmi & Hayden, 2010). Physical exposure is probably the best documented factor. Not only temperature per se, but also the duration and accumulation of heat lead to an increase in mortality. Moreover, heatwaves occurring earlier in the summer period are associated with more excess-deaths, since the populations so exposed are not yet acclimatized to high temperatures (Anderson & Bell, 2011; Basu & Samet, 2002; Rey et al., 2007; Tan et al., 2007). Well-functioning warning, awareness and prevention systems help to en-

sure the population's adaptation, and have been shown in France to mediate the negative effects of heat on mortality (Fouillet et al., 2008).

However, the second dimension of the vulnerability system, determined by the exposed populations' social and environmental susceptibility to the impact of heat, is understudied (Aström, Forsberg & Rocklöv, 2011). In this contribution, a particular effort is made to integrate this dimension into a comprehensive analysis of heat-related mortality. Our research strategy not only ascertains an accurate and differentiated measurement of physical exposure, but also investigates interactions with a complex set of other risk factors in a multilevel perspective. We account for the spatial and socioeconomic heterogeneity of exposed populations to test whether this confounds observed mortality responses to heat, or whether specific socioeconomic and environmental factors exacerbate heat-related mortality. In doing so, we aim to identify multidimensional vulnerability profiles, which are crucial for focusing preventive actions. Relying on daily meteorological information, exhaustive cohort-follow up mortality data and land use statistics, we apply the approach to the exhaustive older population of urban agglomerations in Switzerland.

Previous studies in Switzerland have estimated an excess of 975 deaths (7%) during the 2003 heatwave, defined by a temperature threshold of 34 degree Celsius, which was limited in comparison with other thresholds in Europe (Grize et al., 2005). In the hottest and most Southerly canton of Ticino, death rates were not significantly higher during the heat wave, except to a limited extent among older people (Cerutti et al., 2006). However, physical exposure was only roughly measured in this latter study, and socioeconomic differentials in mortality were not addressed. Intra-urban differences in the number of excess deaths during the 2003 heat wave have been noted, with higher levels in central and suburban communes (Grize et al., 2005), pointing to the potential importance of environmental factors. In this study we will test whether this intra-urban gradient arose from the concentration of vulnerable people, living contexts and environments in central areas (when compared to the agglomeration belt) or from the differential sensitivity of inhabitants to the heat effect.

We will first review the empirical evidence on the determinants of heat-related mortality in relation to anticipated socioeconomic, contextual and environmental differentials, and then introduce the analytical strategy. Results from the multilevel models applied to the exhaustive older population of Swiss agglomerations during the summer periods 2001-2007 confirm a weak independent effect of heat on mortality, which was mainly

concentrated during long and intense heat episodes. The mortality response was also relatively undifferentiated across socioeconomic groups, living contexts and environments. The bulk of the heat effect was actually accounted for by the spatial clustering of populations, which are more at risk of death in general, especially among men. Heat specifically exacerbated the risk of mortality only for institutionalized and, to a lesser extent, unmarried women. The analysis thus confirms the determinant role played by frailty and by the accumulation and spatial concentration of risk factors, rather than their specific effects during heatwaves.

DIVERSITY IN POPULATION SUSCEPTIBILITY TO HEAT-RELATED MORTALITY

Despite identical physical exposure to heat, the population risks of mortality may differ from one place to another for at least three reasons. Firstly, individual determinants of susceptibility and adaptation to heat are not distributed uniformly in space. Differences in population structure (or composition) may therefore confound the comparison of heat-related mortality between neighborhoods, cities or countries. Secondly, the spatial aggregation of individuals and their interactions, as well as exogenous influences, determine place-specific group properties, which affect the health of all inhabitants (Macintyre, Ellaway & Cummins, 2002) and may influence their capacity to cope with heat stress. These so-called contextual effects have been shown to influence mortality independently from individual risk factors (Pickett & Pearl, 2001). Thirdly, environmental characteristics can be considered to be specific factors of mortality during heat (Smoyer, 1998). We will review here the evidence for these three groups of vulnerability factors, with a focus on confounding and interaction effects.

The populations most vulnerable to heat-related mortality are older people and those with pre-existing diseases (Basu, 2009; Basu & Samet, 2002). The body's ability to cope with heat stress (through evaporative skin cooling, increased blood flow to the head, etc.) declines with age, illness and medicine intake. Older and sick people may also perceive heat to a lesser extent and may be constrained in the adoption of adaptive behaviors (Hansen, Bis, Nitschke et al., 2011), such as extensive hydration, which have a strongly protective effect (Vandentorren, Bretin, Zeghnoun et al., 2006). Women are often found to be affected to a greater extent, but we

believe this reflects gender differences in socioeconomic at-risk configurations, as well as in the cause of death patterns related to increased longevity, rather than biological factors.

Apart from these biological and medical factors, there is little agreement on social vulnerability profiles. Social isolation is certainly a risk factor, especially among the older population, because it acts as a barrier for people in need of assistance during heat stress (Klinenberg, 2002). Low socioeconomic status is also presumed to increase risk, because of lower capacity to afford technological adaptations to heat (such as air conditioning), and more vulnerable housing and location.

However, the control of socioeconomic factors at the individual level is a challenge, and can often be done only for a small sample of a population or of deaths. Because of data constraints, the socioeconomic characteristics of the whole population living in a specific place are often used as a proxy for the status of all its inhabitants. Such an approach implies an ecological bias, and reduces the concept of contextual effects to the aggregation of individual effects. This may be one reason for the heterogeneity in the conclusions of studies that have investigated the effect of socioeconomic status at the aggregate level using local percentages of unemployed or low-skilled people, median incomes, or other composite indexes. Indeed, no effect of these variables on heat-related mortality was observed in Rome (Schifano et al., 2009), Brisbane (Yu et al., 2010), Budapest and London (Ishigami et al., 2008). However, poorer neighborhoods had a higher excess mortality relative to affluent ones during heat-waves in St. Louis (Smoyer, 1998) and in the suburbs of Paris (Rey et al., 2009) as well as in US cities (Curriero et al., 2002). In Milan, higher median neighborhood income was, surprisingly, slightly associated with higher heat-related mortality among younger people (Ishigami et al., 2008).

Canoui-Poitrine et al. (2006) observed a change in both the geography and the socioeconomic composition of deaths during the heat wave in Paris when compared to reference years, and concluded that both contextual and individual factors affect heat-related mortality. After controlling for various confounding effects at the local and individual level, manual workers in France were found to have higher mortality during heatwaves than managers who were older (Vandentorren et al., 2006). This contrasted with Mexico and Chile, where individual educational attainment did not have an effect (Bell et al., 2008). Even when the effect of socioeconomic status is estimated simultaneously at the individual and contextual level, results diverge. Local levels of unemployment did not affect

heat-related mortality in Barcelona and Sao Paulo, but the lowest skilled among older women were characterized by the highest excess mortality (Borell et al., 2006; Gouveia, Hajat & Armstrong, 2003). Browning, Wallace, Feinberg, et al. (2006), by contrast, showed that individual socioeconomic characteristics had the same effect on mortality during the 1995 heat wave in Chicago when compared to previous summers. But neighborhood affluence and commercial vitality protected individuals only during the heat wave. A more dynamic social ecology, it was argued, is protective against heat-related mortality, because it maintains more healthy social institutions and limits neighborhood infrastructural decay.

Conclusions regarding social risk factors are also heterogeneous. Social isolation at the individual level is often inferred from marital status, on the assumption that the single, divorced and widowed are more at risk of isolation. Unmarried older people did in fact show higher mortality in Rome (Schifano et al., 2009) and in Paris (Canoui-Poitrine et al., 2006). However, in the latter city, this may have resulted from a selection effect, as marital status did not play a role when controlling for several individual and household-level variables indicating social status (Vandentorren et al., 2006). Living arrangements may be of more importance than marital status. In Modena, unmarried women did not have higher mortality when controlling for negative effects associated with living in either a single-person household or a care institution, where people may respectively feel themselves more isolated and be frailer (Foroni et al., 2007).

At the local level, denser patterns of social interaction are usually expected to increase assistance to those people most sensitive to heat. Assuming that demographically more stable neighborhoods are characterized by a higher degree of social interaction, Smoyer (1998) and Uejio et al. (2011) did indeed observe a negative relationship with heat-related mortality in St. Louis and in Philadelphia. The empirical sociological investigation by Klinenberg (2002) of the 1995 episode in Chicago showed higher vulnerability among African-Americans compared to Hispanics. The author related this differential to the fact that many African-Americans lived in areas of sub-standard housing and less cohesive neighborhoods, while Hispanics lived in areas of higher density, but more social cohesion. However, Browning et al. (2006) did not find an effect of the neighborhood's demographic stability.

In contrast to these competing conclusions on socioeconomic differentials in heat-related mortality at the individual and contextual level, there is more convergence in results regarding the impact of the environ-

ment. Population density and the scarcity of green areas are major determinants (Medina-Ramon & Schwartz, 2007; Uejio et al., 2011; Vandentorren et al., 2006). Dark-colored built environments absorb more heat than green areas and cool down to a lesser extent at night, while nearby high-rise buildings lower the speed of winds that refresh urban air. The concentration of human activity exacerbates meteorological phenomena through the effects of air pollution and the wastage of heat associated with high energy use. The combinations of these factors have been explored by epidemiologists and environmentalists, who coined the term *urban heat island effect* (UHI) about half a century ago. Moreover, urban sprawl exacerbates the heat island effect. More sprawling US metropolitan regions did indeed experience a more marked increase in heat events during the second half of the 20th century (Stone, Hess & Frumkin, 2010), and heat island effects were associated with more numerous and more intense heatwaves in Chinese cities, leading to higher excess mortality in central and suburban communes (Tan et al., 2010).

This review of the literature shows up many apparent contradictions, and highlights the fact that living environments are made up of a combination of many factors, which create 'sub-environments'. Their specific exposure to the risk of heat-related mortality has to be assessed in order to better target prevention. Moreover, data constraints often motivate a focus on one single aspect of the vulnerability profile in isolation from the others. Yet the accumulation of disadvantages has to be taken into account, particularly in urban environments, since individual, contextual and environmental factors in heat-related mortality tend to overlap in highly differentiated settings. The more densely populated neighborhoods may be inhabited by poorer populations, and this fiscal disadvantage may in turn alter the development and maintenance of local infrastructure and environment. In the US, city-centers clearly accumulate factors of vulnerability to heat-related mortality (Reid et al., 2009). Confounding effects must also be assessed to determine the expected efficiency of different alternative interventions. The independent impact of population density on heat-related mortality, for example, was small or in the opposite direction, after controlling for socioeconomic characteristics of local populations in St. Louis, Massachusetts and Paris (Hattis, Ogneva-Himmelberger & Ratick, 2012; Rey et al., 2009; Smoyer, 1998).

The importance of considering simultaneously the various risk factors for heat-related mortality that operate at different levels of social organ-

ization has often been underlined (Basu & Samet, 2002; Canoui-Poitrine et al., 2006; Smoyer, 1998; Yardley et al., 2011), but rarely operationalized (see Browning et al., 2006 for one of the exceptions). While relying on cohort-follow-up data on the exhaustive older population in urban agglomerations of Switzerland, we contribute to this line of multilevel research. We anticipate that older people, and also those who are frailer because of pre-existing diseases, will be more vulnerable to heat stress. Educational attainment and marital status are good proxies for socioeconomic status and social isolation respectively at the individual level, because in Switzerland these variables are most clearly related to health status (Burton-Jeangros, 2009) and strongly affect survival. At age 30, men and women holding a tertiary school diploma can expect to live respectively up to 7.1 and 3.6 years longer than the lowest skilled, and married people benefit from a similar advantage compared to singles (Schumacher & Vilpert, 2011; Spoerri, et al., 2006). We may expect heatwaves to exacerbate these socioeconomic inequalities in mortality, because of differences in available resources and access to social support.

Similarly, a poor living context may increase mortality through its physiological effects on health, particularly in extreme meteorological conditions, because of poor material resources and infrastructural endowment (Pickett & Pearl, 2001). The local distribution of wealth may play a role as well. On the one hand, it is argued that a high degree of stratification of local populations corrodes social capital, and so decreases social support for remaining in good health (Kawachi, et al., 1997; Wilkinson, 1996). This is particularly relevant during heatwaves, when social capital is a determinant for the promotion of adaptive behavior among older people. On the other hand, collective resources (such as recreational areas, higher quality infrastructure, etc.) which benefit all residents are more developed in these settings, thanks to important fiscal contributions by a small minority of very affluent inhabitants (Stafford, & Marmot, 2003).

At the environmental level, we may expect that where a larger proportion of the residential context is occupied by green areas, and population density of the built-up environment is lower, the heat island effect, and hence the mortality response to heat, will be diminished. We also anticipate that individuals living on the top floors of (apartment-)buildings will be particularly exposed to heat stress and the related risk of dying, as occurred in Paris (Vandentorren, et al., 2006). Moreover, urban sprawl is likely to exacerbate these effects, leading to higher mortality during heatwaves.

The strength of our analytical strategy lies not only in the simultaneous appreciation of different factors of the population's susceptibility to heat-related mortality, but also in the accurate measurement of physical exposure to heat. This is made possible by a combination of time-series analysis and the study of differential mortality in a multilevel modeling framework.

Physical exposure to heat is measured using time-series data of daily temperature maxima during the main summer months (June, July and August) for the years 2001 to 2007. These meteorological data were obtained from 26 stations of MeteoSuisse located in urban agglomerations of Switzerland.[3] For each municipality under study, we identified temporal sequences of heat and non-heat episodes over the summer periods. Heat episodes start with at least three consecutive days of temperature maxima of at least 30 degree Celsius (i.e. the official threshold established by MeteoSuisse to launch heat warning systems) and end with the second consecutive day during which the temperature is below this threshold. Thus, we define heat to include at least two consecutive nights during which there are few opportunities to recover from the heat stress; this is also so as to capture lagged mortality effects. This time-varying information on heat in the communes under study is imputed to the daily exposure population of all municipalities of the same urban agglomeration. Using the criteria of duration (at least one week versus longer periods) and temperature maxima (less than or at least 33.5 degrees Celsius), we defined four types of heat exposure: short and weak, short and intense, long and weak and long and intense episodes.

The exposure population aged 65 to 89 is estimated for the summer periods 2001 to 2007 from the *Swiss National Cohort* (SNC) follow-up mortality database: 94% of registered deaths for the years 2001-2007 have been linked to the individuals enumerated at the 2000 Census using a mix of deterministic and probabilistic methods (Bopp et al., 2008). Unlinked deaths were imputed according to a stratified random technique in a later version of the SNC database, and are included in our analysis. Exposure to mortality starts in June of each year and ends either with death or with truncation due to emigration (which is known only for foreigners) or the end of the summer period (end of August). The dependent variable is mortality from all causes. We estimated 408,360,190 person-days of exposure (experiencing 34,155 deaths) and matched these with place-specific daily information on heat-episodes.

Multilevel models are specified to test the independent effect of heat on mortality, as well as its interaction effects with individual, contextual and environmental risk factors. Standard errors of the mortality effects are adjusted for the clustering of individual observations at three hierarchical levels of analysis: individuals constitute the first level and are nested in municipalities defined as the second level, which determine the socioeconomic living context and environment, as well as exposure to heat. Municipality populations are further nested in agglomerations, which constitute the third and last level of analysis.

Discrete-time random-intercept logistic regression models are specified, allowing the intercept to vary across agglomerations and municipalities (Rasbash et al., 2005). The logged-odds of dying are estimated from the model intercept, which constitutes the baseline hazard function of mortality all over urban Switzerland according to time-varying age ($\beta_0(t)$), and the additive effects of individual, contextual and environmental variables, as well as the effect of time-varying heat episodes (respectively x_{1ijk}, W_{1jk}, and $Heat_{1k}$):

$$\log\left(\frac{h_{ijk}(t)}{1-h_{ijk}(t)}\right) = \beta_0(t) + \beta_1 x_{1ijk} + \alpha_1 W_{1jk} + \alpha_2 Heat_{2k} + (v_{0k} + u_{0jk} + e_{0ij})$$

with individuals *i* nested in 737 municipalities *j* composing 26 agglomerations *k*.

The variance in mortality is partitioned into variation between individuals within each cluster (corresponding to e_{oij}) and variation in average mortality between clusters (u_{ojk}, v_{ok},). Thus, the standard errors of the heat effect are adjusted for the local clustering of individual exposures. We also focus on the extent to which local heat-related mortality arose from the spatial concentration of more vulnerable subpopulations, in terms of individual, contextual and environmental characteristics which are controlled for in a second model. Socioeconomic differentials in the mortality response to heat are also investigated through interaction effects in a third model. Models are estimated in MLwiN version 2.2 through the Markov chain Monte Carlo method (MCMC; [Browne, 2003; Rasbash et al., 2005]).

The models are specified for each sex separately, as exploratory tests showed that there was no significant gender difference in heat effects (not shown). We control the heat effect for the differences in population composition in terms of *age, marital status* (married versus unmarried) and the level of *educational attainment* (using broad ISCED categories; none

to compulsory Secondary School I, Secondary School II which is either on-the-job training or general school, and Tertiary). *Frailty and the presence of co-morbidities* are proxied by residence in an elderly or health care institution. Specific risk factors for heat-related mortality are assessed through the interaction effects of these confounders with the four types of heat exposure.

Contextual variables are derived from the 2000 Census. Relative differences in *material deprivation between living contexts* are estimated using the Townsend index (Townsend, Phillimore & Beattie, 1988); an unweighted sum of standardized percentages of overcrowded private households (i.e. more than one person per room), non-owned private dwellings, unemployment rates and the share of population aged 25 and higher having at best a Secondary School I diploma. Based on the relative importance of deprived subpopulations in each cluster, relative to the Swiss average, area-level deprivation is inferred: a high value of the index means a higher than average level of deprivation. *Material inequality within the living context* is estimated using an unconventional Gini-index based on the distribution of wealth, approximated here for each individual by an un-weighted sum of the inverse attributes used for the Townsend index (i.e. not living in an overcrowded household, ownership of the dwelling, not being unemployed and having an educational attainment above the compulsory Secondary I level). The higher the Gini-index, the more unequal is the wealth distribution among inhabitants of a living context.

The Swiss land use statistics of the Federal Office of Statistics (OFS) are used to characterize urban environments. In this analysis, we rely on the 1992/97 version because the latest version has not yet been updated for all Swiss communes. Green and recreational areas, as well as the surroundings of houses and blocks (which are assumed to be mainly green areas), are distinguished from the built-up environment (including the urban transport infrastructure such as roads, parking lots, etc.). Population density refers exclusively to the municipality built-up area. To differentiate direct physical exposure to heat, we also distinguished residents of apartments located on the top floor of buildings from other urban inhabitants. Since information on air pollution is not available for all urban communes, this exacerbating effect of heat could not be controlled for. However, our results should not be significantly biased, as air pollution usually accounts only slightly for heat-related excess mortality (Basu, 2009).

Urban sprawl is measured at the level of agglomerations using the average difference in intercensal demographic growth of the agglomeration belt compared to the city center between 1970 and 2000.

Model 1 adjusts the likelihood of mortality only for the effects of the four types of heat-episode, which all significantly increase mortality among men and women (see Table 1 and 2, respectively). As seen in Model 2, further adjustments for local population composition, context and environments strongly reduce the spatial variance of mortality at the municipality level and increase the fit of the models to the data (as evinced by the decline in the Bayesian Information Criterion (DIC)).

The likelihood of dying increases sharply with age for both sexes. Results also confirm the protective effects of marriage and higher-level education. Mortality in penthouse-apartments did not significantly differ when compared to residents of other private dwellings. However, the strongly increased likelihood of dying for residents in old age or health care institutions confirms their high level of frailty (Lalive-d'Epinay & Spini, 2008). The fact that the excess-risk is more marked for women than for men may be explained by the fact that they are in worse health on moving into institutions. Husbands not only tend to die earlier than their wives, but also more frequently die at home, so that women are more at risk of being institutionalized when experiencing health problems, leading to a higher concentration of frailty.

As expected, a higher level of local material deprivation was associated with a higher mortality. Local inequality, by contrast, is interestingly associated with a slightly lower likelihood of dying (although only significantly for women). This tends to support the hypothesis related to the greater availability of collective resources in highly stratified living contexts. The population density of the built environment and the proportion of green areas do not have a statistically significant and independent effect.

However, the most important result of Model 2 is that the mortality effect associated with short heat episodes, as well as that with long but weak episodes, decreased after standardization of the local exposure population and living context for the aforementioned characteristics. Thus, subpopulations which are more vulnerable to the risk of death in general are concentrated in places most affected by heat, explaining much of heat-related mortality. This spatial clustering of vulnerabilities indeed entirely accounts for the mortality response among men, except during long and intense heat episodes. Among women, it only slightly mediates the mortality effect of all heat episodes, which however remain statistically significant.

Table 1: The effect of heat episodes and individual, contextual and environmental factors on male mortality at age 65-89, Switzerland, June-August 2001-2007

Explanatory variables		Model 1		Model 2		Model 3 (with Interaction effects)									
		O.R.	S.	O.R.	S.	O.R.	S.	O.R.	S.	O.R.	S.	O.R.	S.	O.R.	S.
Constant		0.00	***	0.00	***	0.00	***								
Heat exposure	Non-heat	1		1		1									
	Short-weak heat	1.11	**	1.06	ns	0.95	ns								
	Short-intense heat	1.13	*	1.06	ns	1.04	ns								
	Long-weak heat	1.13	**	1.09	ns	1.31	ns								
	Long-intense	1.18	***	1.16	***	1.20	***								
Individual and municipality characteristics						Non-heat		Short-weak		Short-intense		Long-weak		Long-intense	
Age group	Less than 75 years			0.32	***	0.32	***	1.11	ns	1.03	ns	1.03	ns	0.96	ns
	75 years and more			1		1		1		1		1		1	
Marital status	Not married			1		1		1		1		1		1	
	Married			0.73	***	0.73	***	0.99	ns	1.12	ns	0.86	ns	0.94	ns
Educational attainment	Secondary I (and lower)			1.15	***	1.14	***	1.07	ns	0.94	ns	1.15	ns	1.03	ns
	Secondary **ii**			1		1		1		1		1		1	
	Tertiary			0.79	***	0.80	***	1.04	ns	0.77	ns	0.75	ns	1.02	ns
Household	Penthouse apartment			0.99	ns	1.00	ns	1.01	ns	0.94	ns	0.91	ns	0.91	ns
	Other private household			1				1		1		1		1	
	Institution			2.72	***	2.69	***	1.20	ns	0.67	ns	0.52	ns	1.18	ns
Municipality char.	Inter-municipality deprivation			1.02	***	1.02	***	1.02	ns	0.93	ns	0.98	ns	0.96	ns
	Intra-municipality inequality			0.99	ns	0.985	**	1.00	ns	1.11	ns	0.97	ns	1.02	ns
	Density of built-up area			1.000	ns	1.000	ns	1.000	ns	1.003	ns	1.000	ns	1.001	ns
	Share of green areas			0.999	ns	0.999	ns	1.002	ns	0.997	ns	0.995	ns	0.996	ns
Agglo char.	Urban sprawl					1.002	ns	1.010	ns	1.000	ns	1.027	ns	0.999	ns
Model statistics	Person-days	170'491'473		170'491'473		170'491'473									
	Events	17073		17073		17073									
	DIC	90768		83543		83598									
Geographic Variance	Agglomeration level	0.004	ns	0.002	*	0.003	ns								
	Municipality level	0.014	***	0.002	***	0.000	***								

Source: MeteoSuisse, Swiss land use statistics and Swiss National Cohort database (Census 2000 & Vital statistics 2001-07). Notes: O.R = Odds Ratio, S = Statistical significance (*** = at 0.01 level, ** = at 0.05 level), DIC = Bayesian Information Criterion.

Table 2: The effect of heat episodes and individual, contextual and environmental factors on female mortality at age 65-89, Switzerland, June-August 2001-2007

Explanatory variables		Model 1		Model 2		Model 3 (with Interaction effects)									
		O.R.	S.	O.R.	S.	O.R.	S.	O.R.	S.	O.R.	S.	O.R.	S.	O.R.	S.
Constant		0.00	***	0.00	***	0.00	***								
Heat exposure	Non-heat	1		1		1									
	Short-weak heat	1.15	***	1.09	**	1.03	ns								
	Short-intense heat	1.27	***	1.18	***	1.03	ns								
	Long-weak heat	1.16	**	1.15	**	0.96	ns								
	Long-intense	1.22	***	1.20	***	1.16	**								
Individual and municipality characteristics						Non-heat		Short-weak		Short-intense		Long-weak		Long-intense	
Age group	Less than 75 years			0.30	***	0.31	***	0.91	ns	1.01	ns	1.05	ns	0.91	ns
	75 years and more			1		1		1		1		1		1	
Marital status	Not married			1		1		1		1		1		1	
	Married			0.63	***	0.63	***	0.79	**	1.23	ns	1.09	ns	0.99	ns
Educational attainment	Secondary i (and lower)			1.16	***	1.16	***	1.13	ns	1.05	ns	1.02	ns	0.97	ns
	Secondary II			1		1		1		1		1		1	
	Tertiary			0.82	***	0.81	***	0.90	ns	1.26	ns	0.86	ns	1.05	ns
Household	Penthouse apartment			1.01	ns	1.01	ns	1.06	ns	1.11	ns	0.85	ns	1.01	ns
	Other private household			1		1		1		1		1		1	
	Institution			3.50	***	3.39	***	1.24	ns	1.15	ns	1.17	ns	1.22	***
Municipality char.	Inter-municipality deprivation			1.02	***	1.02	***	1.03	ns	1.01	ns	1.09	ns	1.03	ns
	Intra-municipality inequality			0.98	**	0.989	ns	0.96	ns	0.87	**	0.97	ns	0.98	ns
	Density of built-up area			0.999	***	0.999	***	1.000	ns	0.998	ns	0.999	ns	1.000	ns
	Share of green areas			0.997	***	0.997	***	1.007	ns	0.993	ns	1.017	ns	1.002	ns
Agglo char.	Urban sprawl					0.995	ns	1.023	ns	0.967	**	1.015	ns	0.998	ns
Model statistics	Person-days	237'868'717		237'868'717		237'868'717									
	Events	17083		17083		17083									
	DIC	87861		77507		77537									
Geographic Variance	Agglomeration level	0.006	ns	0.005	*	0.005	**								
	Municipality level	0.014	***	0.001	***	0.001	***								

Source: MeteoSuisse, Swiss land use statistics and Swiss National Cohort database (Census 2000 & Vital statistics 2001-07). Notes: O.R = Odds Ratio, S = Statistical significance (*** = at 0.01 level, ** = at 0.05 level), DIC = Bayesian Information Criterion.

To test whether heat affects the survival of specific populations to different extents, Model 3 includes interaction effects between the four types of heat-episodes and the socioeconomic and environmental variables. With few interaction terms being statistically significant, the general conclusion is that heat has a rather undifferentiated impact. Moreover, the independent effect of long and intense heat episodes remains statistically significant, highlighting a generalized mortality response to extreme heat events.

Model 3 nevertheless shows one substantive result. The most vulnerable populations during heat episodes are clearly the residents of old age or health care institutions. The positive interaction effect of heat and residence in these institutions is stronger and statistically more significant for women than men. Gender differentials in the degree of frailty among institutionalized individuals may again help to explain these differences. Married women are also more protected than others during heat, although only when the episodes are short and weak. The independent mortality effect of short heat episodes, as well as that of long and weak ones, is completely accounted for by the excess female mortality among the non-married and those living in institutions during heatwaves. Moreover, excess-mortality in institutions is strongest in both the most intense heat episodes and the apparently less harmful one, i.e. the long and intense period, as well as the short and weak ones (although not significantly). Other interaction effects of heat, including those with environmental factors, are not statistically significant. Although local inequality and the extent of urban sprawl are significantly associated with lower female mortality during heat, these effects are not consistent across types of heat episode and gender.

DISCUSSION AND CONCLUSION

The Swiss population is increasingly exposed to heat stress during summer periods and is expected to be even more so in the future. The mortality crises during the last European and American heatwaves have been traumatic from a political point of view, leading to a recent accumulation of empirical evidence about their determinants, which should help improve prevention systems in an expected future of global warming, population ageing and urbanization. Yet, there is a considerable geographical heterogeneity in heat-related mortality, which mirrors complex interactions between physical exposure to heat and different dimensions of a socio-

ecological system of vulnerability; these include biological and medical characteristics, individual socioeconomic status, living contexts and the urban environment. The aim of this study was to develop a research strategy capable of integrating these principal lines of investigation to identify specific vulnerability profiles and to account for potential confounding or accumulation of risk factors. Heat exposure was accurately measured and differentiated, and the heterogeneity of the at-risk populations and living environments was accounted for. This was made possible by the linkage of meteorological time-series data and exhaustive cohort follow-up person-day mortality data, as well as land use statistics for Switzerland. The spatial clustering of heat exposure was controlled for in a multilevel model, and interactions with exacerbating or specific risk factors were tested.

We confirmed a small independent mortality effect of the (rare) prolonged episodes of very high temperatures (by Swiss standards). However, our results highlighted a rather undifferentiated impact on survival for the majority of the older population of Switzerland, particularly among men. We did not find marked socioeconomic and contextual differentials in the populations' capacity to cope with heat, nor did we confirm the importance of the environmental factors that are often considered as being specific to heat-related mortality.

Mortality during weak, as well as intense but short, heat episodes mainly occurred in places where risk factors of general mortality accumulate, leading to an increased exposure to the risk of death during heat – especially for men. Switzerland has in fact recently experienced a new intra-urban differentiation in both population composition and mortality. Life expectancy at birth has become lower in central municipalities when compared to agglomeration-belt ones, and this has been explained by the socioeconomic consequences of peri-urbanization: deprived and more vulnerable subpopulations have stayed in city centers, which have experienced not only a downgrading of the living context that may have promoted specific at-risk behavior, but also environmental congestion effects (Lerch, Oris, & Wanner, 2017). Based on our results, we explain the higher mortality during heat episodes by this accumulation and spatial concentration of general risk factors in inner cities, rather than by their specific effects related to heat. Heat did not significantly exacerbate differentials in individual risks of dying among men, but the combination of individual, contextual and environmental risk factors into a particularly vulnerable profile during heat lead to an increase in mortality. However, the

mortality response among women was confounded to a lesser extent by such a compositional effect. Heat episodes did specifically exacerbate the risk of dying for those women who were isolated and frail, as was indicated by increased mortality among the unmarried and those in institutions.

The limited effect of heat on mortality in Switzerland may be related to the small size of cities, to the high living standards providing the majority of population with the resources to cope with heat stress, as well as to a high minimum standard of housing. Similarly, the socially undifferentiated nature of the effect underlines the efficiency of the socio-sanitary system of prevention and intervention among the most vulnerable groups, including those in old age and health-care institutions. The higher risk of mortality in institutions was in fact shown to be concentrated in both the apparently harmless and the very intense heat episodes, which can be explained by the fact that these are respectively hard to predict and particularly difficult to cope with over a prolonged period. Moreover, Switzerland ranks among the world's top-five countries in terms of longevity; mortality is strongly compressed in older ages, with deaths mainly occurring between 72 and 88 for males and 78 and 92 for females. This leaves little room for mortality differentials during the relatively short exposure periods constituted by heat episodes. Since heat fatalities in Switzerland particularly involved people who are frailer or more vulnerable in many regards, harvesting may have played a non-negligible role in precipitating deaths that would have otherwise occurred only a few days or weeks later. However, these speculations require further research.

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2. In an article published in 2008, Jean-Marie Robine and his colleagues even estimated that « Death toll exceeded 70,000 in Europe during the summer of 2003 » (Robine, Cheung, Le Roy et al., 2008).
3. In the four agglomerations for which two measurement points are provided, we selected the most central one.

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